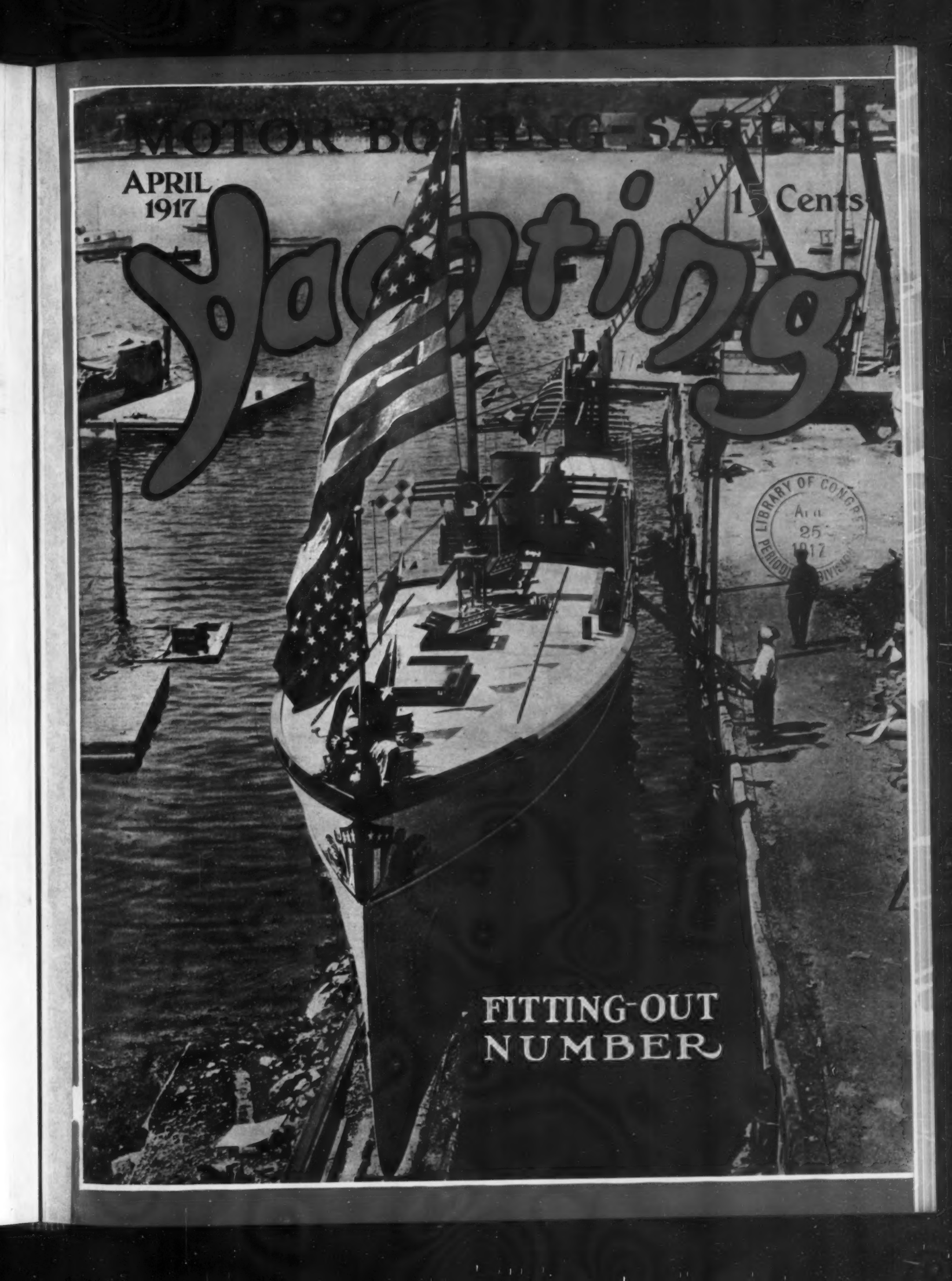
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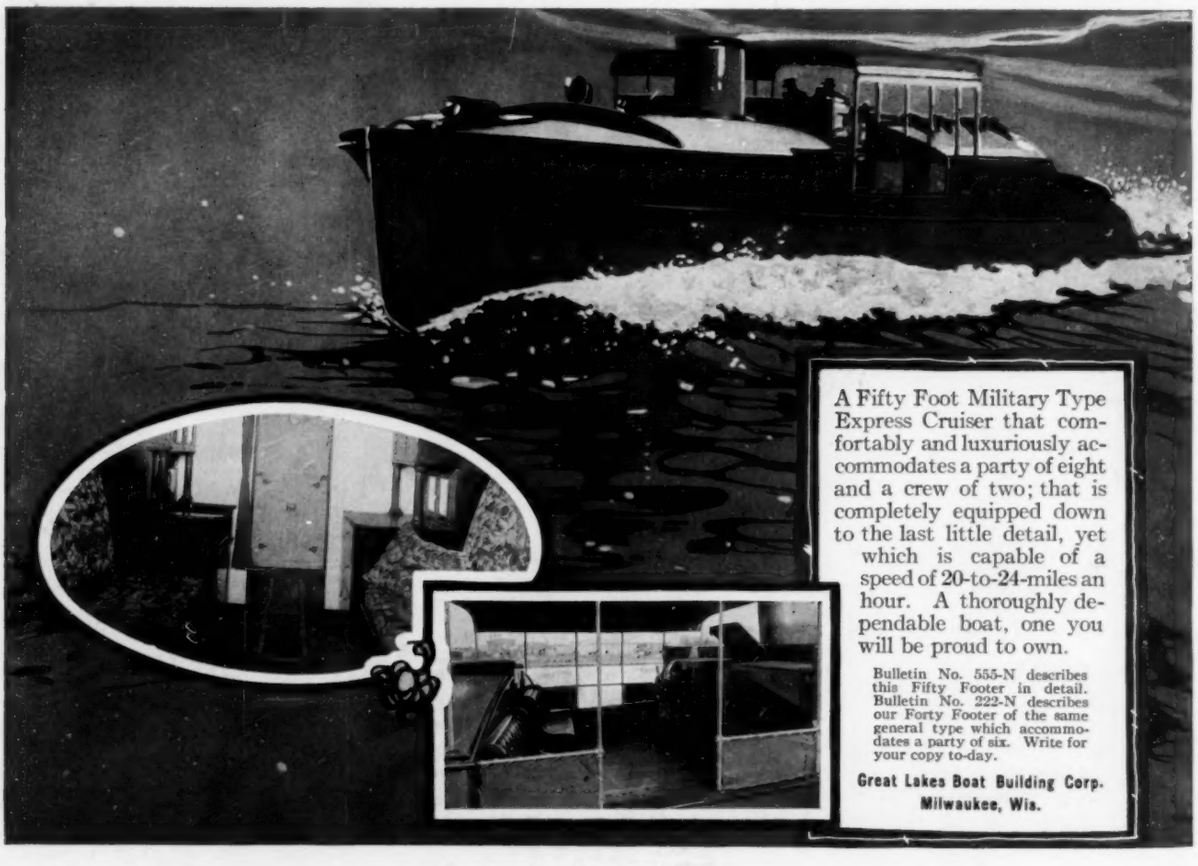

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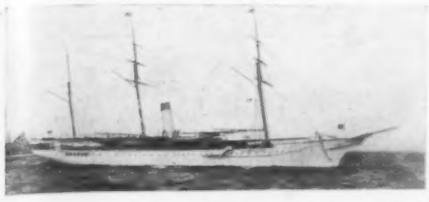

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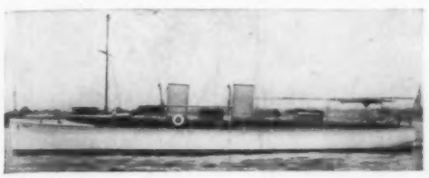
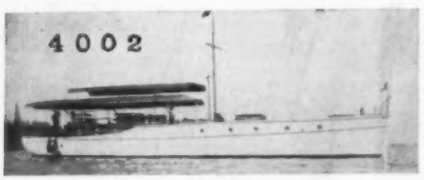


NO. 5262—FOR SALE OR CHARTER.—Handsome raised deck cruiser, 57.6 x 10.10 beam x 3.4 ft. draft. Cruising speed 10 miles. Main saloon, 13 ft. long, full headroom. Sleeps five among owner and guests. Very desirable. Gielow & Orr, 52 Broadway, New York.



NO. 4002—FOR SALE.—75 ft. twin-screw raised deck cruiser. Cruising speed, 10 knots. Main saloon, 12 ft. long, 6.6 ft., headroom. Sleeping accommodations for nine among owner and guests. Good seaboat. Gielow & Orr, 52 Broadway, New York.

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NO. 3956—FOR SALE.—Auxiliary sloop, 48.8 x 41.11 x 14 x 2.7 ft. Sleeps four, owner's party. Has bath room. Speed under motor, nine miles. Gielow & Orr, 52 Broadway, New York.

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NO. 1472—FOR SALE OR CHARTER.—Auxiliary yawl, 71 x 45 x 15.2 x 9.6 ft. 1915 sails. One double, one single staterooms, two transoms. Sleeps five. Good cabin equipment. Gielow & Orr, 52 Broadway, New York.

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NO. 1828—FOR SALE OR CHARTER.—Attractive power yacht; 75 x 13 x 3.6 ft. Speed 11-12 miles; Standard motor. Dining saloon, two double and one single stateroom, bath, two toilets; all conveniences. Cox & Stevens, 15 William St., New York.

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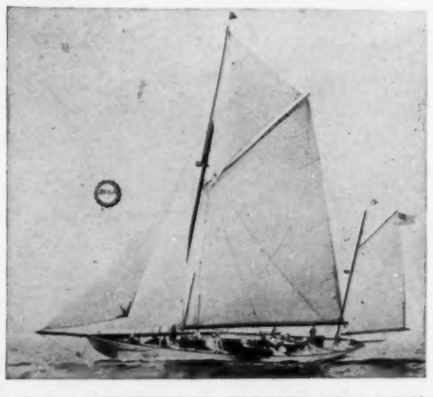

NO. 2331—EXCEPTIONAL BARGAIN.—Most desirable flush deck, keel auxiliary of size available; 94.6 ft. overall, 64.8 ft. waterline, 20 ft. beam, 96 ft. draught. Speed under power 7½ miles, 55 H. P. Sterling motor. Independent electric light plant, Ratsey sails and complete equipment, all new 1915. Two double, one single stateroom, two bathrooms, large saloon, etc. Special opportunity. Cox & Stevens, 15 William St. New York.

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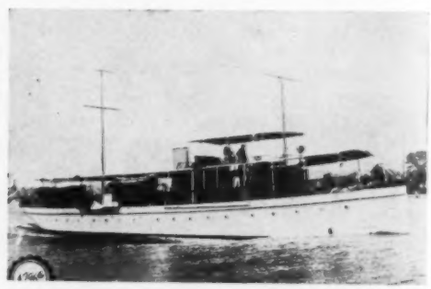
NO. 1026—FOR SALE.—Modern bridge deck cruiser; 53 x 10.3 x 3.4 ft. Speed 10 miles; 24-30 H. P. 20th Century motor. Double stateroom, saloon, separate galley, etc. Price low. Cox & Stevens, 15 William St., New York.



NO. 1796—FOR SALE OR CHARTER.—Very roomy, twin-screw cruising power yacht, 99 x 17 x 4 ft. Speed 13-15 miles; Standard motors. Large dining saloon, six staterooms, three bathrooms; all conveniences. Cox & Stevens, 15 William St., New York.

NO. 1728—FOR SALE OR CHARTER.—Best keel auxiliary schooner yacht of good size available; 114 ft. overall, 80 ft. waterline, 23 ft. beam, 10 ft. draft. Lawley built. Speed under power 9 knots; 100-125 H. P. 6 cylinder Standard motor. Large accommodation. Cox & Stevens, 15 William Street, New York.

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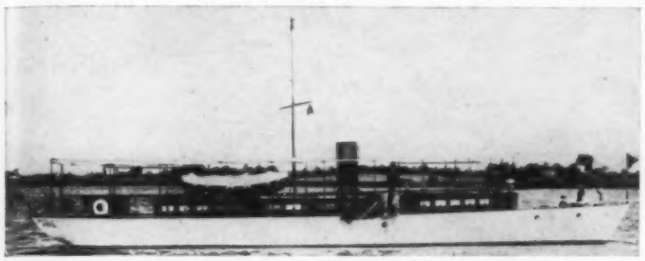
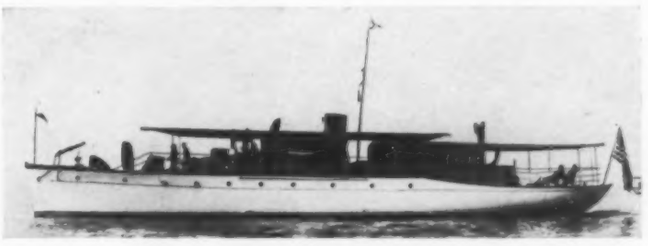
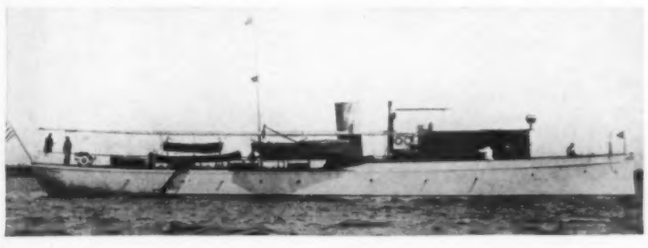


NO. 1357.—Twin-screw power yacht, 75 x 11.6 ft., two six-cylinder motors, speed 16 miles Double planked hull, etc. Apply William Gardner & Co., 1 Broadway, New York.



NO. 1638.—Twin-screw power yacht, 90 x 16.6 ft., two 6-cylinder Speedway motors, speed 16 miles, finely appointed. Plan, etc., from William Gardner & Co., 1 Broadway, New York.



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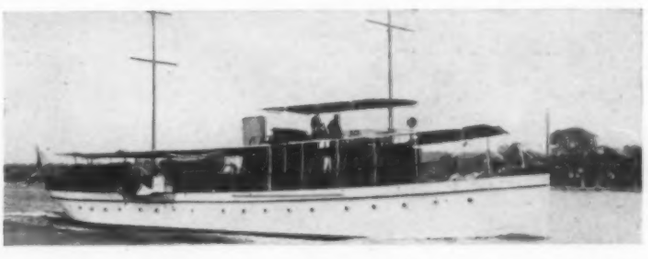
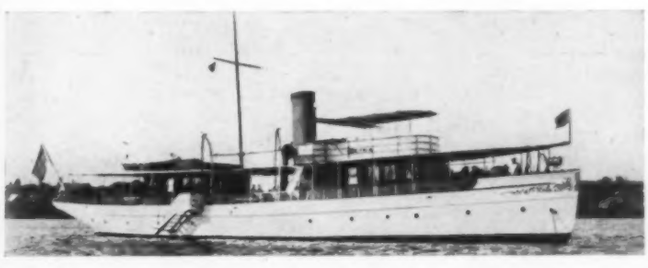


NO. 1753.—Sale—Charter. Twin-screw power yacht, 99 x 17 ft., Standard motors, speed 14 miles, large deck house, excellent owner's accommodations. Apply William Gardner & Co., 1 Broadway, New York.



NO. 1388.—Twin-screw, flush deck, power yacht, 112 x 15.6 ft., two 6-cylinder motors speed 12 knots, two deck houses, after one recently added. Inspection invited. Apply William Gardner & Co., 1 Broadway, New York.

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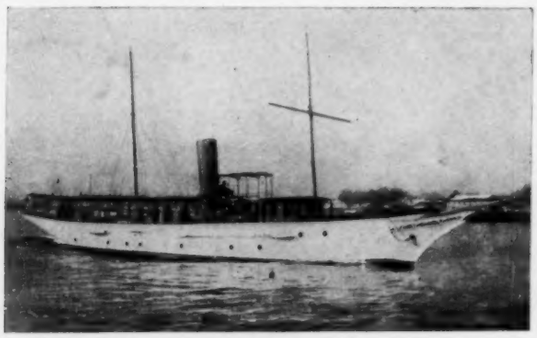
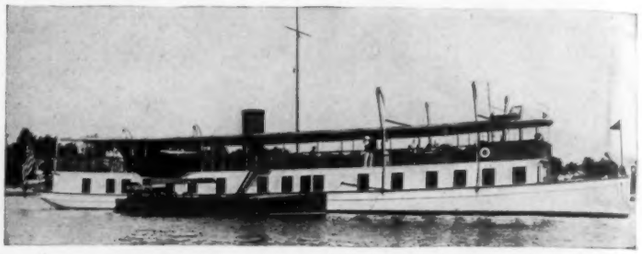
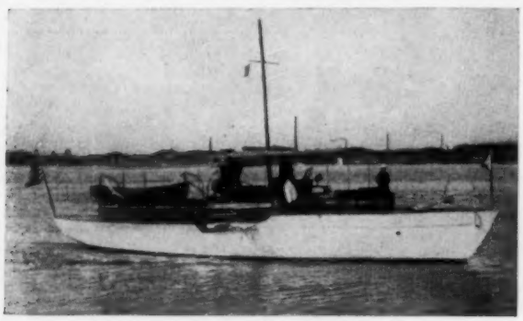


NO. 7987—FOR SALE OR CHARTER.—Modern cruising motor yacht 106 x 13.6 x 6 ft. draught. Built 1911. 300 H. P. Standard motor; speed 13 knots; 4 staterooms, saloon below, deck dining saloon, bath room, 2 owner's water closets. Lighted by electricity. Large quarter and bridge decks. Full data from Tams, Lemoine &Crane,52 Pine St., New York.



NO. 1848—SALE—CHARTER.—Modern houseboat, ideally suited for southern waters, 123 x 115 x 17.8 x 3.4 ft.; 2 Standard motors, 4 large staterooms, 2 bathrooms, saloon; very large shade deck; lighted by electricity and has new ice machine. Full particulars from Tams, Lemoine & Crane, 52 Pine St., New York.



NO. 8940—FOR SALE.—Exceptional opportunity to purchase at a bargain, raised deck cruiser, 61 x 12.10 x 3.6 ft. draught, built 1909, 2-40 H. P. Knox motors new 1912, lighted by electricity. Excellent owner's accommodations Further particulars from Tams, Lemoine & Crane, 52 Pine St., New York.

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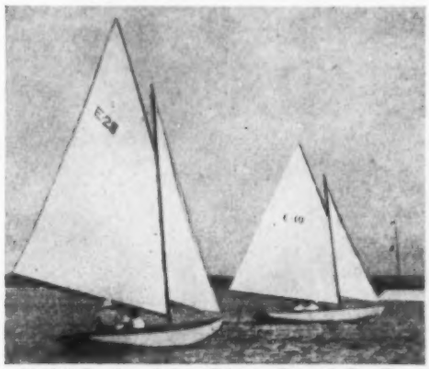

FOR SALE. One of the well known Buzzards Bay Herreshoff, 15 foot waterline, one design class knockabouts. Built in 1909 and in perfect condition. 24 feet overall, 6 feet 10 inches beam, 2 feet 3 inches draft. Outside lead ballast of 1,000 pounds with the centerboard passing through it. Roomy cockpit. Sail area of 320 square feet. Storage space under deck forward. Air tight compartments. Bronze blocks and the best rigging. Splendid boat for boy or girl to learn to sail in. These boats are seldom offered for sale and this is a rare opportunity to purchase one of these very desirable knockabouts. May be seen near New Bedford, Mass., by applying to Hollis Burgess Yacht Agency, 15 Exchange Street, Boston, Mass.

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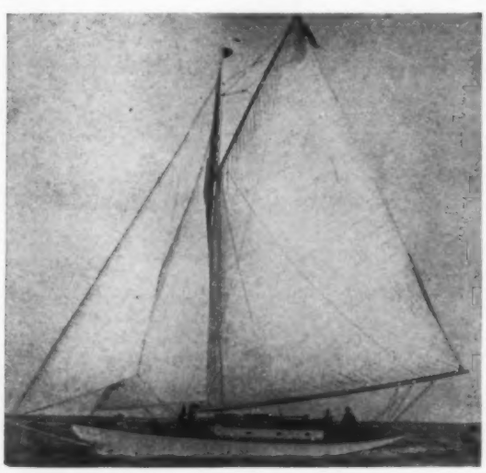

FOR SALE.—Auxiliary cruising sloop, 51 ft overall, 32 ft. waterline, 11.11 ft. beam, 7.4 ft. draught, 11 gross tonnage. Built by George Lawley and Son Corporation in 1901 from designs of Crowinshield. 10-12 H.P. 1912 Fulton motor giving speed of 6 knots under power alone. Constructed in the usual high grade Lawley manner. 5 tons of lead on keel. One of the best arranged and most elaborately finished craft of her size and type ever constructed. Unusually large cabin, 6.2 ft. headroom with two spacious closets, two fixed berths with wide transoms in front, sideboard at forward end, all finished in panelled mahogany. Forward on starboard side large toilet room 6 ft. long; 6-ft. galley with stove space, ice chest, etc. Berths for two men forward, toilet, etc. Sails in perfect condition. Completely equipped in every respect. May be seen in Boston by applying to Hollis Burgess Yacht Agency, 15 Exchange St., Boston, Mass.

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NO. 2085—FOR SALE.—Scout cruiser, fastest of the fleet, 54 x 10.6 x 3 ft. Built 1916. Two Van Blerck motors 150 H. P. each. Self starters. Speed 30 miles. Accommodates six over night. Described in our booklet. Price $12,000. G. W. Ford Yacht Agency, New York, N. Y.

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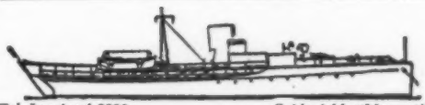
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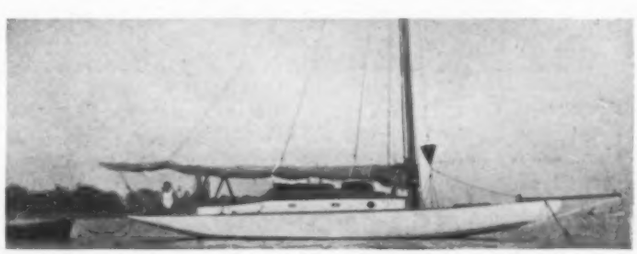

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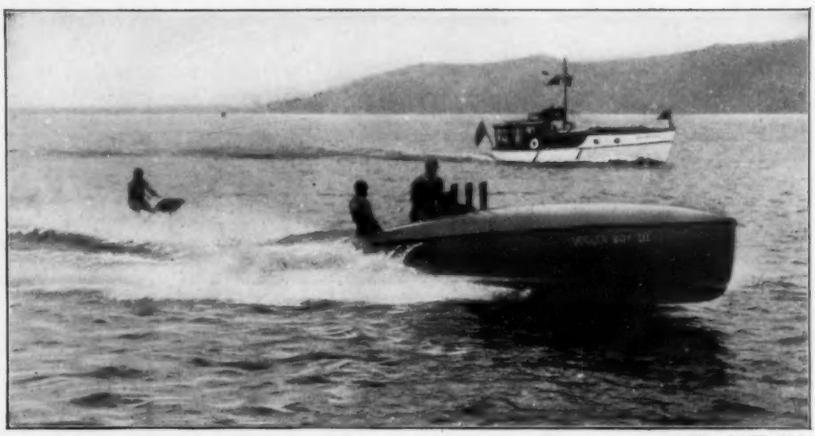

Photo by Woodfield

THE presence of Valspar on the bright work of most speed boats is easily explained. Valspar gives longest wear and least worry. It dries quickly and dries hard. It positively will not turn white. It maintains its beauty of finish.

A Valsparred speed boat goes to the mark looking like a winner. You find Valspar on most speed boats. They demand the utmost of a varnish. They get it in Valspar.

The "Vogler Boy III," shown here, is another example of a Valsparred Speed Boat. She was designed by John L. Hacker and built by W. H. & E. Von Der Werth, of Portland. "Vogler Boy III" is champion of the Pacific Coast. Just another case of a Valsparred winner.

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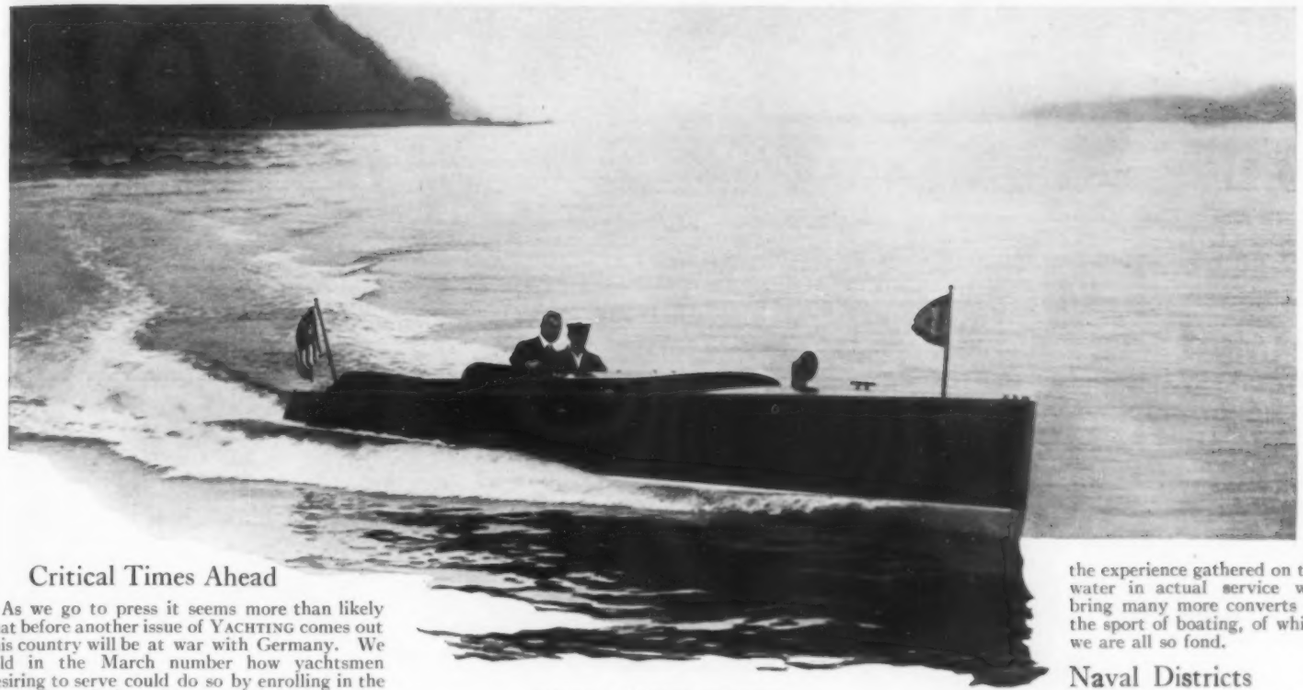

AMORITA, A 28-FOOT RUNABOUT

Critical Times Ahead

As we go to press it seems more than likely that before another issue of YACHTING comes out this country will be at war with Germany. We told in the March number how yachtsmen desiring to serve could do so by enrolling in the Naval Coast Defence Reserve, and the Volunteer Naval Reserve.

The starting of enrollment in these two organizations was hampered somewhat at first by the details of the organization not having been worked out or definite plans for enrollment having been formulated. Since then the means of enrollment have been perfected, the Navy Department is getting in many men, both as officers and enlisted men, for use on the Naval Patrol Fleet, the recruiting stations in the principal cities of the East are crowded, most of the applicants being yachtsmen, merchant officers, crews of harbor and river boats, etc. Recruiting offices have been opened in New York at 26 Cortlandt Street, where an examining officer and medical officer are in daily attendance. A great many yachtsmen have already enrolled, getting commissions as Ensign, or Lieutenant, junior grade, and other ratings as non-commissioned officers.

There is no question that if war comes the yachtsmen of the country will be the first to respond and they will be particularly valuable to the Navy Department in manning the large auxiliary fleet which will be formed. The country will need many more men than they now have.

Information relating to service in both the Naval Coast Defence Reserve and the Volunteer Naval Reserve may be had from the recruiting officers, or by applying to YACHTING.

The A. P. B. A. Takes Action

At a meeting of the Council of the American Power Boat Association steps were taken to place the strength and machinery of the only large governing body in motor boat matters at the disposal of the government. Representing some 143 yacht clubs with a membership of over 28,000, the A. P. B. A. is co-operating with the government by the stimulation of enrollment of those familiar with the handling and operation of motor boats, by disseminating information concerning enrollment and collecting all data regarding boats of its members, etc. With the machinery for reaching this number of boatmen throughout the country the Government will find the help of the organization very valuable.

How long the war will last, if it comes, and what it may lead to, no one can say. The probability is that we will not see much of it in this country, except for submarine raids on American shipping and the possible stirring up of internal trouble or trouble with some of our sister republics of the South; but, once in, one can never tell where events may lead.

We all hope that it will soon be over, and that then the experience gathered on the water in actual service will bring many more converts to the sport of boating, of which we are all so fond.

Naval Districts

For the benefit of those enrolling on the North Atlantic seaboard, we would state that the first naval district, with headquarters at Boston, comprises the New England Coast; second naval district with headquarters at Newport, extends from Montauk Point to Martha's Vineyard, including Buzzard's Bay; the third naval district from Barnegat to Montauk, with headquarters at New York; fourth district from Barnegat southward, with headquarters at Philadelphia.

Amorita, a 28-Foot Runabout

Aren't these two chaps stingy? Such a fine boat, with so much room to spare and a wonderful day. Wouldn't you like to be along? Amorita is a 28-foot V-bottom runabout. Lightly, but strongly constructed, she runs just fast enough to show her forefoot and make you wish that gasolene was less expensive so that you could run a thirty-five miler on what it costs to drive Amorita twenty-three miles.

Entirely planked and decked in mahogany with a white boot-top at the waterline and bottom paint of light green, she presents a fine appearance and makes an impression that grows the more one sees of the boat. Amorita was launched the first of last September, built to order for W. T. Randolph, of the New York Motor Boat Club from plans furnished by Frederick K. Lord of New York, who also supervised the building.

The engine, a 40 H. P. Mason 4-cylinder 4½ x 6, is entirely enclosed and is set so that even the reverse gear is in front of the steering bulkhead. The reverse is brought through the bulkhead by means of a rod and handle instead of the customary vertical lever. This leaves an entire absence of boxes or levers on the floor of the helmsman's compartment and hence gives more room and freedom of motion. All controls are brought to the wheel and there is a revolution indicator on the dash to tell when you are getting the best out of the engine. The gasolene tank is placed under the 'midship seat where a full or empty tank would make little difference in the trim of the boat. Alongside of the tank are two small lockers for tools and waste while under the back seat and deck is a large storage compartment for side curtains, life preservers, etc. The exhaust pipe is brass tubing, water being injected at the engine end and no muffler used. The equipment includes wicker chairs, and a McClellan One-Man Auto Top. The only thing not mentioned is the thrill that comes from riding in such an outfit.

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HERBERT L. STONE, Editor

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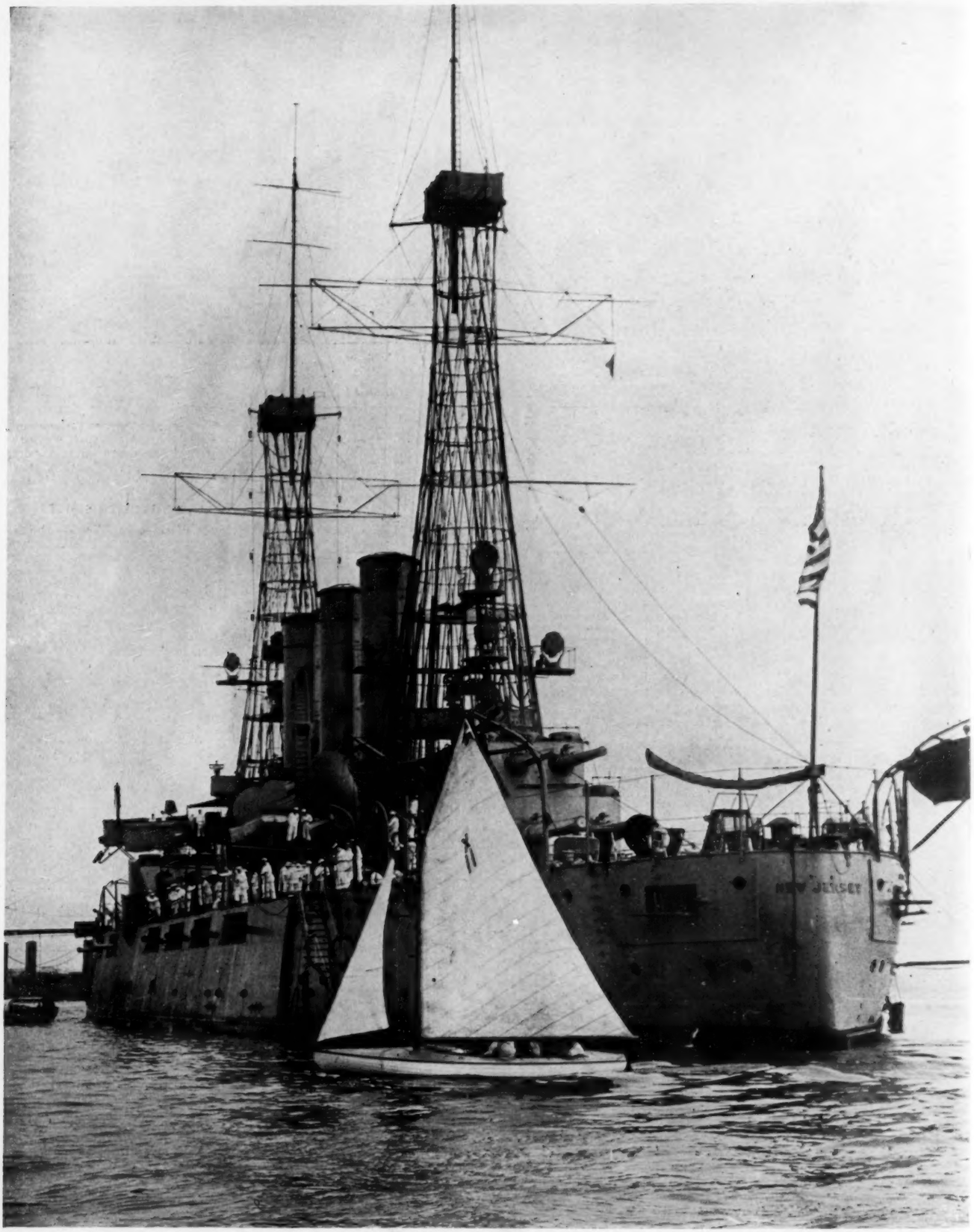

IN THE SHADOW OF THE FLEET

YACHTSMEN ON GRAVESEND BAY LAST SUMMER BECAME QUITE FAMILIAR WITH THE BATTLESHIPS DURING THE PRACTICE CRUISE. THEY MAY BECOME EVEN BETTER ACQUAINTED WITH THE NAVY THIS SUMMER FROM THE INSIDE INSTEAD OF FROM THE OUTSIDE

APR 24 1917

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YACHTING

VOLUME XXI, NUMBER IV APRIL, 1917 15 Cents a Copy $1.75 a year

FITTING OUT TIME

Hints on overhauling the boat for the man who does his own work and finds pleasure in doing it

UPON the dying of the blustering gales of March, the trickling away of the remnant of snow that has hidden itself on the shady side of outbuildings, stone walls and fences, there comes the kindliest whisper upon the breath of the new coming South wind suggesting a trip to the boat yard and one of exploration under the canvas cover or wooden shelter that has protected the good Addie M, or Betsy B, or whatever her name is, all the winter through.

Once aboard, and as the weather promises fair days, let's roll up the cover, straighten things up a bit, and plan ahead for the annual spring overhaul.

Thanks to a general cleaning up last fall including a thoroughly cleaned underbody, topsides and decks, with the spars, blocks, sails and rigging stored indoors, an opening each end of the winter cover and open doors and port lights aboard the boat, thus ensuring proper ventilation, the old boat is in tip-top spring condition. The very disagreeable and laborious job of scraping off dried barnacles, grass, scum and all other of the various kinds of foulment that seem possessed to grow upon a boat's bottom is thus unnecessary, the marine growth having been scrubbed off while still wet and easily removed. All of which is as it should be.

The cushions, carpets, curtains, loose fittings and awnings are stored away with the spars and sails and although they may not have been cleaned and repaired during the winter may be attended to during the days when the weather prohibits work on the boat outdoors.

After a general and careful survey of the condition of the boat and its equipment a comprehensive plan should be adopted for repairing, repainting and refinishing it so that at the re-launching the craft may look its best and be in such order as to see the season through without miscellaneous and vexatious repairs and replacements that will mar, if not spoil, the efficiency of the boat and thus prevent the fullest enjoyment of the summer's sport.

Beginning with the Winter Covering

It is best, if possible, to remove the canvas covering on a clear day for then it will be perfectly dry and all ready to roll up and laid away until another storing time comes. Preserve the various wooden members of the ridge pole and slatted frame that supported the canvas, bundling and tying them securely so as to be stored with the rest of the winter's covering. If a temporary wooden cover is used stack this lumber in an out of the way place somewhere and batten it down so that its handy loose odds and ends will not be used by the workmen of the shipyard.

Cleaning

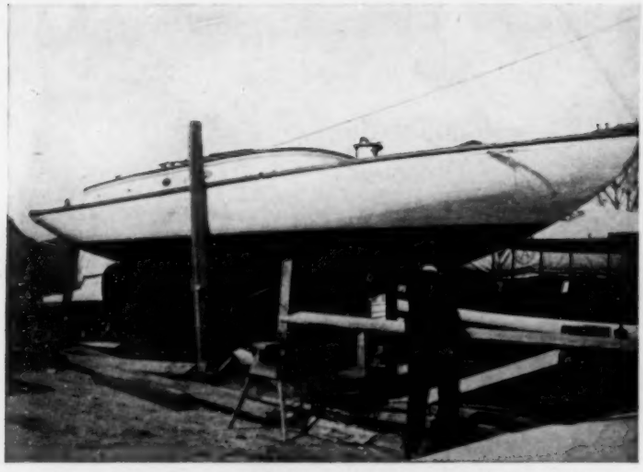
As more or less dust and grime collect it is necessary to wipe up the decks and cockpit and even inside the cabin in preparation for the real work of painting etc., that is to follow. It is not advisable at this stage of the work to scrub or scrape everything in sight because, before all of the work is completed, it will be dirty again.

It is a better plan to scrub as the work progresses and always in overhauling the boat begin at the top and work down for this allows all dust, scrapings and paint drops to fall on unfinished portions of the work.

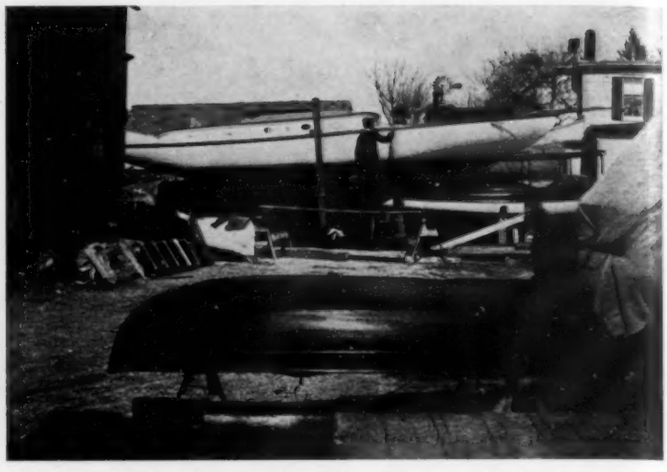
Scraping and Varnishing

Bright work that is in bad condition should be scraped. This work is best done with a cabinet scraper and not with one of those triangular shaped ones with a handle. These are made for heavier work and are apt to dig in unless used very carefully. If, however, the varnish is hard and thick, it is best to use some one of the many excellent patented varnish removers that are laid on with a brush and then left for fifteen to twenty minutes allowing time for it to soften the varnish, which then may be cleaned off with a dull, wide-bladed putty knife. Wood that is badly stained may be bleached by a coat or two of oxalic acid (crystals dissolved in hot water). Oak is the greatest offender in this respect, it being especially susceptible to discoloration by the elements, but, fortunately, it is also the most quickly corrected by the oxalic treatment. In scraping do not clean more varnish off than may be revarnished or shellacked before night for a shower, or even dew, will make necessary a second oxalic bath. It is absolutely necessary to wash the woodwork after cleaning with this bleach, else the varnish will not dry as it should.

The varnish brushes needed are one about 2½″ wide for decks and the larger surfaces and a smaller one for mouldings, window frames, etc. It pays to use the best grade spar varnish for exterior use and even inside, as house varnish or interior varnish is useless for outside work in a boat. Varnish goes on smoother and lasts longer



IN OVERHAULING THE LARGER CRAFT IT IS NECESSARY TO BUILD A SINGLE PLANK SCAFFOLD TO GET AT THE WORK



BEGIN TO SCRAPE THE MOULDINGS AND OTHER BRIGHT WORK FIRST AND ALWAYS WORK FROM THE TOP AND DOWN

if it is put on warm; that is why it is best to varnish while the sun shines. On cold days it is good practice to keep the varnish pot in a pail of hot water, thus keeping it and the brushes warm.

A stormy day, sometimes a number of them, is sure to come in fitting out time so here's the chance to clean up the spars, the tender, oars, side steps, and the other loose fittings. The spars should be scraped and varnished with at least three coats of varnish, though four is better, allowing ample drying intervals between them. The coats should be put on thin and rubbed out thoroughly.

The dinghy is a hard proposition to scrape, especially the planking inside if of the lapstrake variety and, if badly scratched, it is perhaps best to paint the portion inside below the seat tops with some good neutral color. The outside looks better varnished, the inside wales and the seat tops. Usually the tender is left till the last minute, and then launched without overhauling. Proof of this is the number of well kept craft we see towing a battered and unkempt small boat.

The rigging must be carefully inspected, especially the ends of the standing rigging wherever there is a splice or serving. The raw hide covers should be replaced if badly worn for they protect the strands and prevent them from wearing or rusting. If one strand lets go the strength of the whole line is lost and it had best be entirely renewed. Turnbuckles are apt to corrode and rust. These should be cleaned and greased thoroughly else they may be twisted off when setting up the rigging. Running rigging must be attended to, stray ends whipped and perhaps some of it replaced. Often times a line may be turned end for end and so given added life.

Caulking, Paying and Puttying Seams

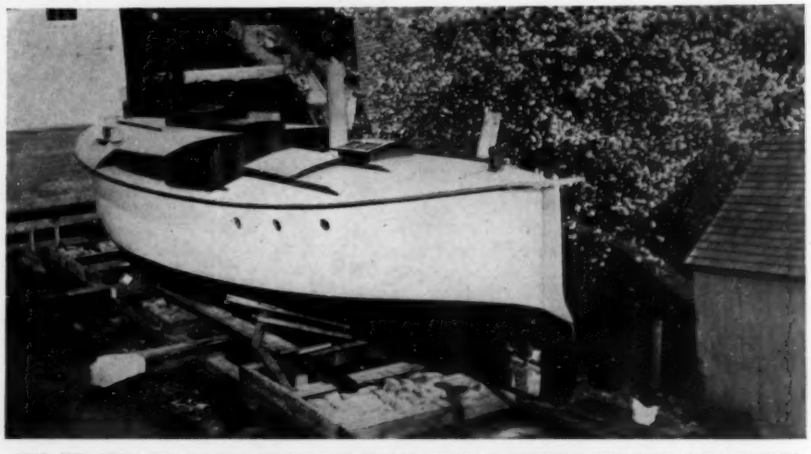
As the boat will be dried out somewhat from its exposure to air and wind this is the proper time to give the seams a minute examination. Unless the boat is old the caulking should be in good condition and also much of the putty. However, there are some parts of the hull that through strain and twist from the urge of the sails and rigging generally require attention. Usually in the garboard seam near the mast stepping,

PUTTING THE FINISHING TOUCHES ON THE ENGINE

the seams of the bilge amidships, and around the centerboard.

Recaulking an old boat is a particular job and driving in a bit of caulking here and there, "chinching her up," old boat men call it, must be properly done to be effective, for, unless it is rolled into the seams in sufficient quantity, depending upon the width of the seam, and driven home as it should be, when the planking swells some parts of the seams will be tight and others insufficiently so. Also, seams should be dry else the caulking will not hold. Usually, in small craft cotton wicking is better than regular caulking cotton and is much easier to apply. Cotton is suitable for wide seams and oakum only for those of large craft of heavy construction. After the caulking is in, the seams must be smoothed off and payed; that is, painted with red or white lead paint and, just before this is dry should be puttied with red or white lead putty,—putty and red lead mixed half and half. While puttying fill all the holidays and scratches, painting each one of them first to cause the putty to hold. If possible, allow this to harden for a day or two before painting and then sandpaper the topsides and bottom using a cork or wooden block with the sandpaper wrapped around it.

(Continued on page 245)



SPIC AND SPAN THE BOAT IS READY FOR RE-LAUNCHING, EXCEPTING THE MAST AND AWNINGS WHICH MAY BE ERECTED AFTER THE CRAFT IS AFLOAT

And Thus Ends

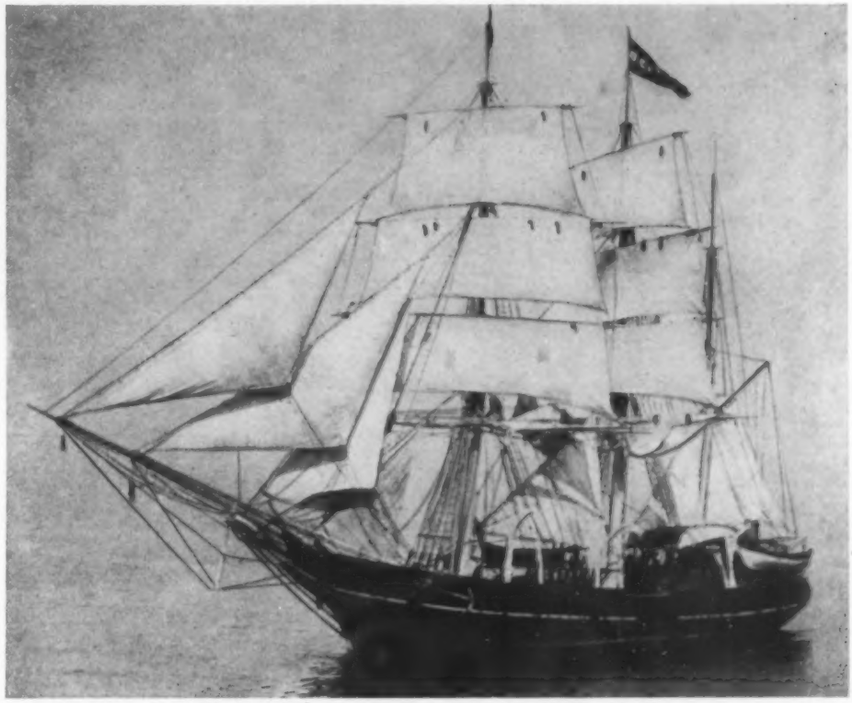
Extracts from the Log of a Whaling Voyage from 1839 to 1841 as Kept by the Boatsteerer

By JAMES E. MURPHY

THE sea with all its romance presents no more interesting history than the records of the old time whaling voyages. Weeks lengthened into months, months into years, yet the crews of stout-hearted men never ceased their vigilant search for whale. They were a little world in themselves. The meagre news that reached them from the world they left behind was months old before they received it.

The records of that grand fleet of whalers has come down to us in the logs written amid gales and calms, sunshine and rain. We cannot fail to read them without a sense of sorrow that those stout-hearted sailormen and their sturdy ships are gone. The present day activities are but a flash in the pan.

On August 21, 1839, the ship Mentor, a New London whaler, passed Block Island and headed for Fayal and the whaling grounds. Like the majority of the craft from that vicinity she was in the hunt for the southern whale. She was in command of Capt. William Baker. Boatsteerer James A. Rogers kept the log. The log book is eight by twelve inches, with a canvas cover evidently made by Mr. Rogers. More or less legible on the cover are the words: "Journal Of A Whaling Voyage On Board The Ship Mentor, of New London, Capt. William M. Baker. Kept by James A. Rogers."



A TYPICAL NEW BEDFORD WHALER, BARK BERTHA. THEIR SMALL SIZE MAY BE SEEN WHEN IT IS SAID THAT THIS VESSEL IS ONLY 168 TONS REGISTER AND BUT 100 FEET IN LENGTH BY 25½ FEET BEAM

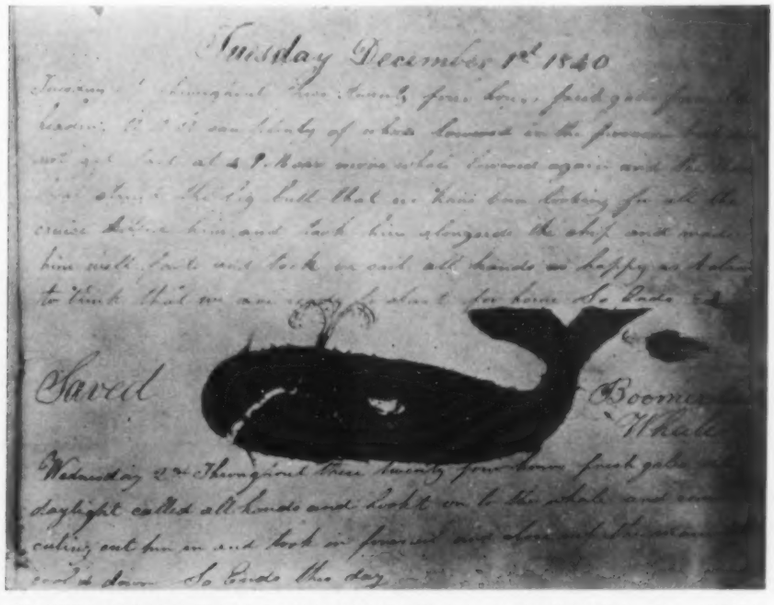
The writing is very regular and neat. In a true sense it is not a real log since the records of courses, speed, wind, etc., are not regularly entered. These were probably kept by the mate. In all, it presents the writer as a far-seeing serious man, but one who saw and enjoyed the humorous side of life and was outspoken when occasion demanded.

The extracts from the log given here cover only those parts that deal with accounts that must necessarily differ from the logs of other ships, just as the ship and its crew differed from other ships. The voyage from Fayal began with an entry different from its neighbors.

"Sunday, Sept. 9, 1839. Caught a dolphin and ate him for supper."

Friday the 13th found the Mentor under the spell of that double combination of hard luck. The happenings of that day speak volumes for superstitious seamen and landlubbers:

"Begins with fresh E. trades and squally. Steering S. About a quarter before 7 a. m. the fore topgallant mast broke short off to the cap carrying away the main royalmast with the man forward was seting on the royal yard at the time, he was thrown off and catcht on the end of the fore topsail yard and from there down between the rail and the swing boom when he catcht by the studding sail outhaul and hung on until he was bent on and hauled in board and carried aft, and the captain bled him and took him down in the cabin. He



FACSIMILE OF ENTRY IN LOG OF THE MENTOR THE DAY OF STRIKING THEIR LAST WHALE

was hurt very little for the distance he fell was 120 feet.

The man at the masthead was thrown from the yard but he caught hold of one of the stays.

Turned too and cleared away the remains of the wreck and got up other in its place."

Whether the captain's rough doctoring—or should it be called surgery?—or the man's rugged constitution was the curative element, the fact remains that the man was up and around the next day.

The phrase "Nothing doing," would appear to be "Manhattanese" of several years vintage, but it occurs many times in that log of over seventy-five years ago. The 19th of September was a day of social activities. That day the Mentor had a "gam" with another whaler. The log reads:

"Capt. Baker went aboard the North America. The captain of the North America got so drunk that he went to the scuttle but to light his cigar; he had been flogging two of his men just before we spoke to him. Got a couple of goats out of him."

From this we must conclude that it was a great day for goats, as it is evident that the flogged men got the captain's "goat," hence the flogging.

Old "Comfort," evidently the ship's carpenter, has gone down in history on October 9. On that day he "finished a shelf to put the crockery on, not exactly crockery because it is all tin."

Then followed a period when only gonies and cape pigeons were seen, varied with an attempt to catch a porpoise. Failing in this, they killed a pig. Looks like spite work, but they can't be blamed for wishing to add a sea pig to the stock of goats, chickens, pigs and ducks that held forth on the deck.

The seventy-eighth day, November 7th, there is the rough stamp of a "bull whale, 75 bbls.," this was their first whale.

"—we cut him in at 4 p. m., saw another, lowered four boats struck him but the iron drawed. And thus ends these twenty-four hours boiling."

The weather was now "very rugged" and the boats were not lowered, even when whales were seen. They were in the midst of the whaling grounds by the first of the new year.

"Struck six whales, saved three, lost the head of the second whale. Latter part calm. All of the whale turned up close to each other. This is what I call greasy luck."

And now comes Friday, not the 13th, but the 31st.

"Bound to Tristan De Acuna. Found our new sails full of holes by the rats."

There is no comment as to what kind of "luck" that would be called. Yet the 13th of the following month brings joy. "Saw island of ice 300 feet high. Pig was delivered of 11 pigs." And again on the 15th.

"This day another family of fresh pork came into the world. Plenty of pork to fat on now."

But Friday still pursued them. On that day, the 28th of February, the starboard boat was capsized and on Friday the 20th of March, one of the men "fell down the hatch but didn't hurt himself much as he struck on his feet."

Thursday, April 21, the Mentor came to anchor at Amponam. Here the captain sent off "a bullock that was tougher than the devil. Every one that wants fruit must sell his clothes as the Cap't won't buy it for them."

"Sunday, April 24, one watch went on shore on liberty to run around the folks without a damd cent in their pockets, but we made out to get along without."

But the middle of the week brought trouble. Mr. Slater "hammered" one of the men, while Mr. Bolles "paid another in the same coin."

Thursday, April 28. This day all liberty stopped. Enough said. That was one thing that could be had without money. But let us return to Friday, the 12th of June:

"The captain sent some eggs forward and in the steerage. But they stunk so like the devil that we were obliged to burn rags to drive the smell away.

Friday, August 7. Begins and ends with fresh breezes. At 11 a. m. saw a humpback. Mr. Potts struck him close to the ship and turned him up and took him alongside the Mentor. Last night about 12, five men lowered away the bow boat with their clothes and some provisions and did not tell where they were going nor bid us goodnight. Capt. Baker, Mr. Slater and Mr. Brown with a boats crew went on shore armed with pistols, one old sword that you could ride to Boston on and one old musket that was warranted to miss fire, but did not happen to have a skirmish. The boats crew were armed with lances. Capt. Baker threatened to shoot any one that proved false."

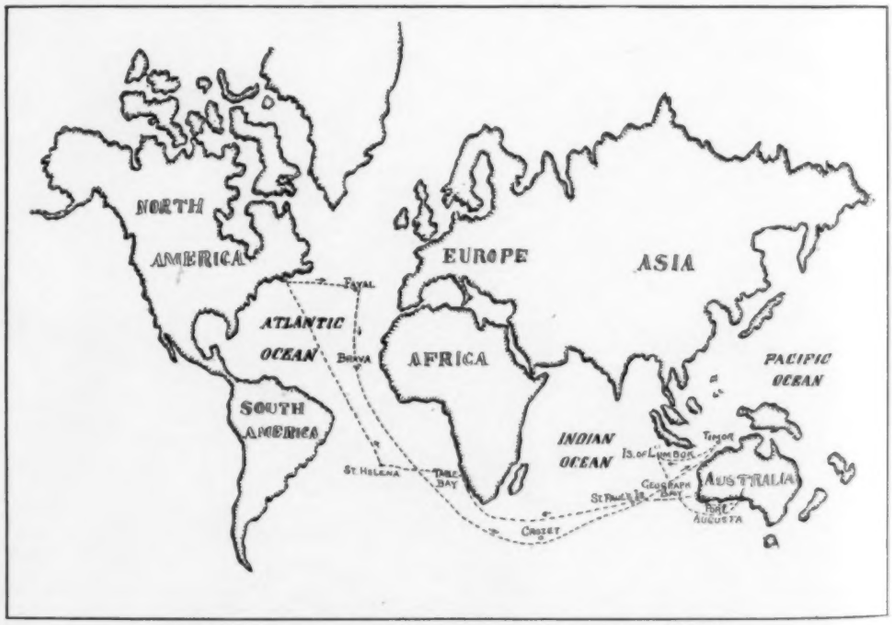
A prolonged stay in Port Augusta, with passengers and freight for Vasse, causes Mr. Rogers to write that the amount of rowing on that account was more than that spent in chasing whales the entire voyage.

Joy follows sorrow:

"Saturday, November 14, 1840. Glorious Jubilee On Board Ship Mentor. Married this day at sea By Capt. William M. Baker, Mrs. Kennedy, of Scotland to Mr. Burt, of England. After the wedding was over the rest of the day was celebrated by splicing the main brace with all hands, then got the wedding supper consisting of ginger bread and wine sweetened with a little gin; after supper got the fiddler down in the cabin and Pompey the steward to give them a touch of Zip Coon. Thus ends."

But the said joy did not long continue. The next day the log states that the menu began all over again, "pork and beef, then beef and pork."

"Tuesday, December 1, 1840. The bow boat struck the big bull that we



TRACK CHART OF THE VOYAGE OF THE WHALER MENTOR, 1839-41

have been looking for all the cruise; killed him and took him alongside the ship and made him well fast and took in sail; all hands as happy as a clam to think that we are ready to start for home. Thus ends."

The entries show now even a relaxation on the part of the log keeper. They are mainly composed of one line sentences. The entry for March 16, deals with the loss of one of the captain's pets, possibly a parrot.

"All these twenty-four hours fresh winds—Capt. Baker's Ameo made his disappearance. We calculate that he has gone to look for some duff that was thrown overboard a day before. The carpenter was building a house for him, he thought the rent too high and made his exit sometime in the night. One cent reward will be paid for the recovery of his carcass. So ends."

Slowly the Mentor makes her way to her home port which is reached on the 28th of March, 1841, five hundred eighty-five days out, with a catch of fifty-four whales, four of which were sperm.

"How oft they've kept the midnight watch
Beneath the starry sky;
How oft they clambered icy shrouds
When seas ran mountains high.
And they have seen the works of God
In calms and in storms too,
With salt spray splashing in their eyes
While ploughing the wild waves through.

They've seen waves round them dash
When man could not avail,
They've heard the winds and saw them rend
To tatters every sail;
And they've faced death a thousand times
And Providence was good,
To those old tars, for many years
The storms they have withstood.

Yes, they've seen the angry waves
Like giants in their might,
O'erwhelm the best and bravest hearts
And bear them from their sight.
And still with all their troubles,
With the hardships they went through,
A more generous-hearted lot of men
You never, never knew.

I care not, you may scoff at them,
Who safe in harbor keep;
But never can he forget his God,
Who ploughs the stormy deep.
For on that deep and mystic sea,
There is a sacred spell
That none but sailors know and fear,
And none but they can tell.

Those gallant tars got lots of jars
That's known to me and you.
But you'll never know, till storms do blow,
What those old tars went through."

—JOE HARRIS.

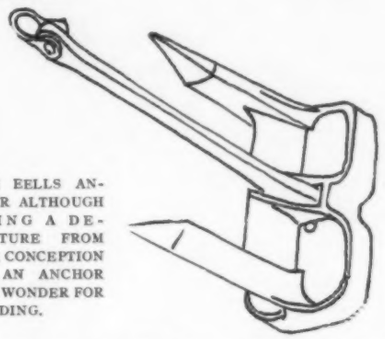
["And *thus ends* this day" is the stereotyped closing entry of the ship's log at the end of every 24 hrs. The form still prevails until this day on sailing ships—Ed.]

Outfitting the Boat

Quite as important as the boat's spring overhaul are the replacements and additions to the deck and cabin equipment so necessary for comfort and safety afloat. First of all equipment is that justly demanded by law and every boat, large or small, especially power craft, must and should be adequately protected against collision or fire, and have sufficient means for sustaining afloat all persons aboard in case of accident. In this connection it is not amiss to give extracts from the motor boat laws which read as follows:-

Lights

SEC. 2. That motor boats subject to the provisions of this Act shall be divided into classes as follows:



THE EELLS ANCHOR ALTHOUGH BEING A DEPARTURE FROM OUR CONCEPTION OF AN ANCHOR IS A WONDER FOR HOLDING.

Class one. Less than twenty-six feet in length.
Class two. Twenty-six feet or over and less than forty feet in length.
Class three. Forty feet or over and not more than sixty-five feet in length.

SEC. 3. That every motor boat, in all weathers, from sunset to sunrise, shall carry the following lights, and during such time no other lights which may be mistaken for those prescribed shall be exhibited.

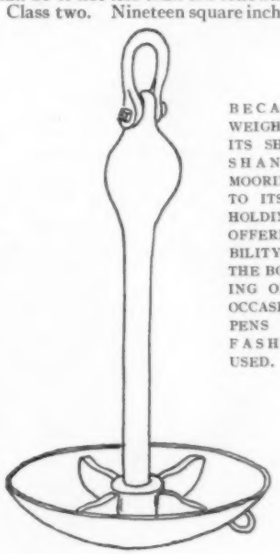
(a) Every motor boat of Class one shall carry the following lights:

First. A white light aft to show all around the horizon. Second. A combined lantern in the fore part of the vessel and lower than the white light aft, showing green to starboard and red to port, so fixed as to throw the light from right ahead to two points abaft the beam on their respective sides.

(b) Every motor boat of Classes two and three shall carry the following lights:

First. A bright white light in the fore part of the vessel as near the stem as practicable, so constructed as to show an unbroken light over an arc of the horizon of twenty points of the compass, so fixed as to throw the light ten points on each side of the vessel, namely, from right ahead to two points abaft the beam on either side. The glass or lens shall be of not less than the following dimensions:

Class two. Nineteen square inches.



BECAUSE OF THE WEIGHT IN THE END OF ITS SHANK THE BULB SHANK MUSHROOM MOORING LIES DOWN TO ITS WORK, THUS HOLDING BETTER AND OFFERING SMALL POSSIBILITY OF DAMAGING THE BOAT AT THE FALLING OF THE TIDE, AS OCCASIONALLY HAPPENS WHEN THE OLD FASHIONED TYPE IS USED.

Class three. Thirty-one square inches.

Second. A white light aft to show all around the horizon.

Third. On the starboard side a green light so constructed as to show an unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side. On the port side a red light so constructed as to show an unbroken light over an arc of the horizon of ten points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the port side. The glasses or lenses in the said side lights shall be of not less than the following dimensions, on motor boats of—

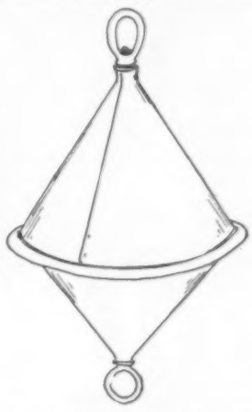
Class two. Sixteen square inches.
Class three. Twenty-five square inches.

On and after July first, nineteen hundred and eleven, all glasses or lenses prescribed by paragraph (b) *of Section 3* shall be fresnel or fluted. The said lights shall be fitted with inboard screens of sufficient height and so set as to prevent these lights from being seen across the bow and shall be of not less than the following dimensions on motor boats of—

Class two. Eighteen inches long.
Class three. Twenty-four inches long. Provided that motor boats as defined in this Act when propelled by sail and machinery or under sail alone shall carry the colored lights suitably screened but not the white lights prescribed by this section.

Whistle, Fog Horn, and Bell

SEC. 4. (a) Requires that every motor boat under the provisions of this Act shall be provided with a whistle or other sound-producing mechanical



A GALVANIZED IRON MOORING BUOY FITTED WITH A HOSE TENDER FLOATS HIGH, IS EASILY CAUGHT WITH A BOAT HOOK AND WILL NOT SCRATCH THE FINISH AT THE BOAT'S SIDES.

appliance, capable of producing a blast of two seconds or more in duration, and in the case of such boats so provided a blast of at least two seconds shall be deemed a prolonged blast within the meaning of the law.

(b) Every motor boat of Class two or three shall carry an efficient fog horn.

(c) Every motor boat of Class two or three shall be provided with an efficient bell, which shall be not less than eight inches across the mouth on board of vessels of Class three.

Life Preservers

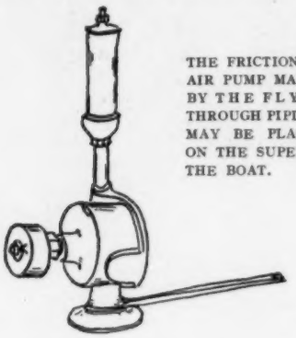
SEC. 5. Every motor boat subject to any of the provisions of this Act, and also all vessels propelled by machinery other than steam more than sixty-five feet in length, shall carry either life preservers or life belts, or buoyant cushions, or ring buoys or other device, to be prescribed by the Secretary of Commerce and Labor, sufficient to sustain afloat every person on board and so placed as to be readily accessible.

Fire Extinguishers

Every motor boat and also every vessel propelled by machinery other than steam, more than sixty-five feet in length, shall carry ready for immediate use the means of promptly and effectually extinguishing burning gasolene.

Two copies of the rules governing motor boats must be aboard each motor-driven craft.

Pleasure sailing craft when underway are obliged only to show the regulation side lights and while at anchor, a white light shining all around the horizon. However, it is well also to have a fog horn, one of the mechanical kind is best as it takes considerable wind to blow one of the tin horn variety at stated intervals, for hours at a time. Auxiliary boats are classed as motor boats and should be so equipped. There is nothing like preparedness, and in this respect it is especially valuable.



THE FRICTION DRIVEN POWER AIR PUMP MAY BE OPERATED BY THE FLYWHEEL AND, THROUGH PIPING, ITS WHISTLE MAY BE PLACED ANYWHERE ON THE SUPERSTRUCTURE OF THE BOAT.

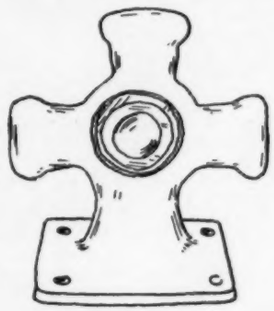
The pump is usually a much forgotten article except when needed badly and then it is a very friendly kind of a thing to have aboard and much in demand, even though its name suggests work and trouble. Without pumps or some means for removing water shipped aboard, or that has trickled through the seams, none of the long voyages of exploration could have been made, for the boats of those early exploring days would have filled two or three times over and settled long ago to Davy Jones' locker. So the pump equipment is very important. Owners of boats with power are especially fortunate in this respect as there are a number of first class mechanical bilge pumps, some built integral with the motor

AN ELECTRICALLY ILLUMINATED HEADLIGHT AND TOWING BITT COMBINED THAT SOLVES THE PROBLEM OF THE BOW SAILING LIGHT ON SMALL CRAFT.

and others designed for later attachment that are efficient and serviceable.

An anchor always seems to be in the way, especially the old fashioned type with stock, shank and fluke. These have the habit of becoming snarled with every bit of stray line and always are in the way. Of recent years a great deal of thought has been given to the anchor problem and there are a number of patented ones on the market that through the ingenuity of their creators are better holding devices than the old fashioned kind, easier to handle and lighter for the same holding power. Among these are the stockless anchors, like the Babbett and Baldt that are used by the U. S. Navy, or the Hall and the Ells, the last mentioned is a new comer in the field and is very different from the old fashioned conception of an anchor and a wonder for holding in any kind of bottom.

In connection with anchors one's thoughts stray to proper chain and cable for their handling. Chain has many advantages but, for small boats, is not so handy as manila line. Some large craft use steel cable for



A TRIPLE COMBINATION OF HEADLIGHT, BITT AND CLEAT THAT MAY BE EASILY BOLTED TO THE FORWARD DECK

ground tackle but this is hardly practical aboard small boats. In former years capstans and windlasses were used only on large craft as there were none on the market light enough or small enough to be installed in small boats. Nowadays, however, there

WITHOUT A SHIP'S CLOCK THAT STRIKES, THE CRUISER'S EQUIPMENT IS INCOMPLETE.

are a number of patented makes, some of them electrically operated that through ingenious contrivances allow one man with only the movement of a lever to raise or lower very heavy anchors.

Special anchors made for mooring purposes are now made and among the better of these is the bulb shank mushroom. This anchor has a ball of about 25% of the anchor's total weight on the end of the shank which causes the mushroom to rest on its side and prevents all chance, at the falling of the tide (as in the case of the older types) of the boat's settling on the verticle shank.

Mooring buoys are a necessary part of the equipment and these are made in a number of different styles, one of the popular ones being of cedar, a galvanized hoop at the lower end and a swivel shackle at the upper. These may be painted black and white, or red and white stripes, and, as they stand far out of the water, are easily found at night. Galvanized iron buoys are made in a number of shapes, but the one shown in the illustration is as well liked by boatmen as any. It is fitted with a hollowed

IF MADE BY ROBINSON—RODER THE LIFE PRESERVER IS SURE TO BE OF THE HIGHEST STANDARD

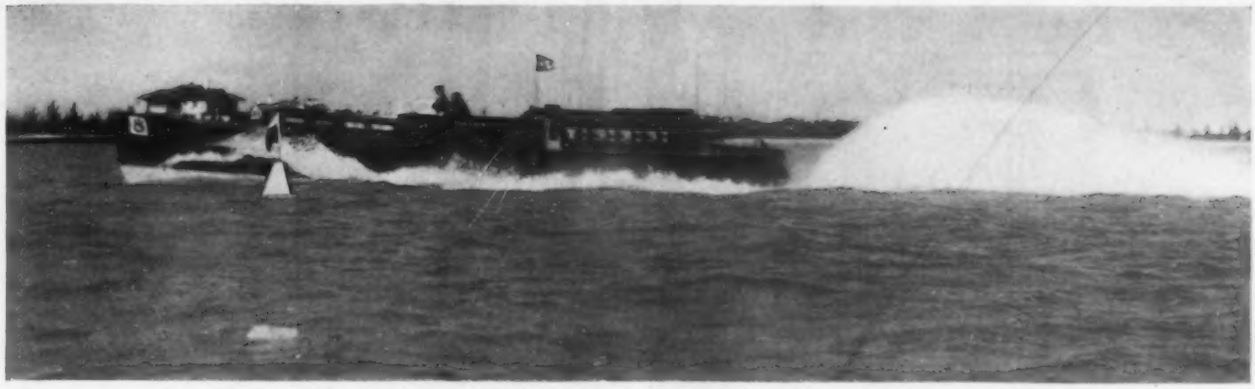
metal moulding around the edge into which may be run a hose moulding, thus preventing its chafing the sides of the boat as sometimes happens.

The galley equipment includes so many things that are fine to have, ranging anywhere from a stove to nickel plated glass holders, that in a short article of this kind it is hardly possible to go into all the details. Suffice to say that practically anything needed in a galley can be purchased from the advertisers in YACHTING, any one of whom will be glad to mail catalogues of their products.

The cabin to be comfortable should be properly upholstered, keeping cushions, curtains, carpets, etc., of color and style to be in harmony with the interior trim of the cabin. Of all cabin equipment perhaps the most important is a first class clock, those made by the Chelsea Clock Co. being among the best and practically standard for this use. Wicker furniture supplies a long felt want in the boat's cabin and cockpit equipment, as it is light and extremely serviceable and of such design and finish as to be especially suitable for use on the water. Electric lighting is almost universally used on power boats and is the safest kind of light to use aboard ship. However,

FOR SNOOPING ABOUT IN DARK CORNERS AND CRANNIES AN ELECTRIC TROUBLE LIGHT IS INVALUABLE.

where this is not possible acetylene lighting is a fair substitute with kerosene lamps as a last resort. A portable electric light of some description will prove a great convenience on any boat and ought to be included in its equipment, for it is invaluable for hunting about in the dark for some lost article, especially aboard power craft where gasolene fumes are prone to be about.



RAVEN III TAKING THE LEAD ON THE SECOND LAP IN THE EXPRESS CRUISER RACE THE FIRST DAY

The Third Annual Miami Regatta

By W. W. REDMOND

Photographs by Robinson

The First Day's Race

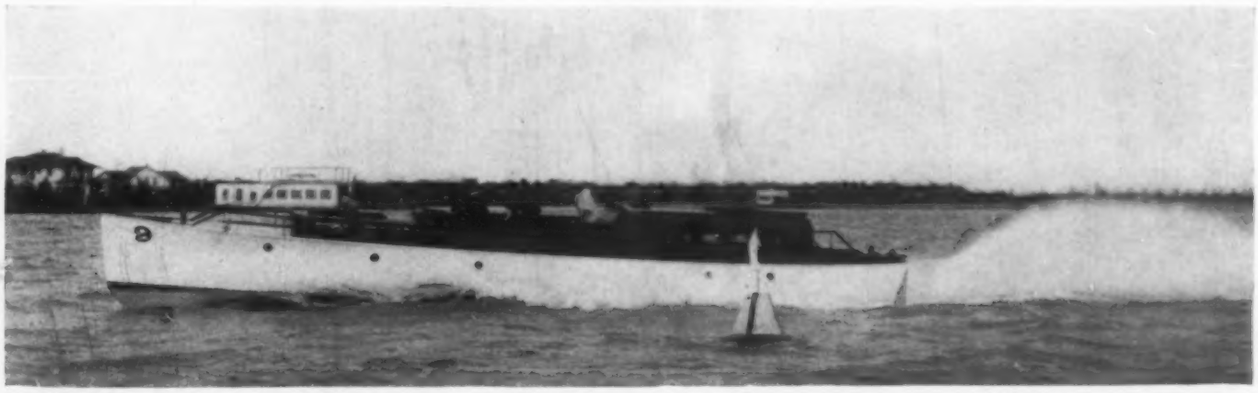
THE Third Annual Miami Regatta opened with wonderful weather. The Biscayne Bay Race course was at its best. "Success" was the word on every lip during the events, as the thousands who gathered at Alton Beach to witness the most elaborate program ever arranged for the sport-loving people in any city, turned to one another to voice their opinions and appreciation of the various spectacular and sensational happenings before their eyes. Thousands witnessed the various events; conservatively the estimate would make it from fifteen to sixteen thousand people. From one o'clock on they began coming and taking their places in the grand stand or automobile parking places. Upwards of two hundred yachts lined the western side of the course and added a finishing touch to the scene.

Promptly at 2 o'clock on February 15th, the open displacement boats were called together and were sent off to an excellent start at 2:12 p. m. Five boats started, but Stroller smashed her propeller on the first lap and Baby Glenn very early developed internal troubles. The Mar-y-cel immediately began to show her ability and the result of the race was never in doubt as long as her power-plant behaved itself. Fred Duesenberg himself, the designer of the big 400 H. P. Duesenberg motor installed in this boat, was at the helm and drove the boat throughout the race. At no time was he pushed and doubtless Mar-y-cel is good for better than the speed shown by the records. Otgadai made a splendid run and was very consistent but the big power in Mar-y-cel was too much for her, although her owner, J. F. Betz, never slackened down and made the race as fast as his boat was capable of doing. Jan. II owned by Mr. J. H. Snowden is a beautiful boat, a Seabury product, but was hopelessly outclassed by the other two boats, both of which were built more for high speed work than for carrying capacity.

The express cruiser race which followed was by far the most spectacular event of the afternoon. Only three boats were in shape to start, but they furnished excitement galore. Old reliable Boomerang, the winner of last year's Key West-Miami Race, got away first, closely followed by Raven III and then by Shadow III; they bunched close at the first turn and brought every one in the grand stand to his feet. At the end of the first lap Boomerang was just one second ahead of Raven and Shadow was just one second behind Raven. It was a wonderful sight to see the three boats with not a boat's length between them come tearing down by the grand stand throwing out great wings of water and doing their utmost to get ahead. During the second lap Boomerang had trouble getting circulating water to her engine and had to slacken down a little; this let Raven come up and pass her, closely followed by Shadow, and that's how they finished, Raven and Shadow hanging together and keeping the decision ever in doubt until the starter dropped the finish flag and the timers declared Raven the winner by just one second.

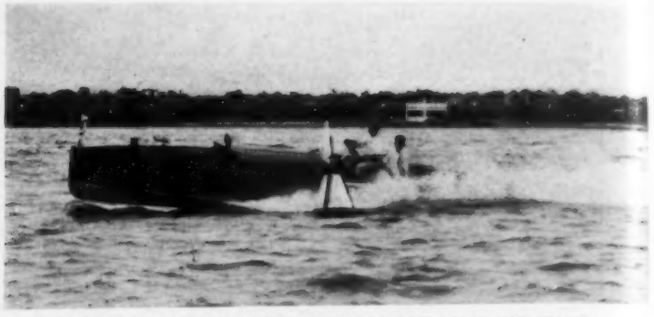
Both Raven and Shadow were designed and built by the Purdy Boat Company of Miami and are splendid examples of the boatbuilder's art. Both boats are powered with a pair of eight-cylinder "Speedways" developing in excess of 200 H.P. each.

Commodore Kotcher was the happiest man in Miami and jollied his competitors, Carl Fisher and Huston Wyeth; but these



SHADOW III, IN THE CAPABLE HANDS OF HER OWNER CARL FISHER, SET UP A NEW EXPRESS CRUISER RECORD OF 30.1 MILES PER HOUR THE LAST DAY. SHE ALSO TOOK THE MIAMI-KEY WEST RACE OF 161 MILES

SHADOW III, AN EXPRESS CRUISER EMBODYING MANY NEW IDEAS



OTGADAI, DISPLACEMENT RACER, SEEING HOW CLOSE SHE COULD SHAVE THE BUOY

gentlemen told him to wait and see what they would do to him in the next race. The Commodore, however, seemed fully confident of his boat's ability to win all the races. The Timers were: O. J. Mulford, W. M. Frisbie, C. E. McGraw, John Nichols, Harry T. Vars. Judges: Ralph Worthington, John H. Hanan, Kirk Munroe, C. W. Lee, J. C. Wetmore, G. W. Moore. Starter: Rex W. Wadman.

SUMMARY, OPEN DISPLACEMENT BOAT RACE—FIFTEEN MILES, FEB. 15, 1917

Boat	1st	2nd	3rd	4th	5th	6th lap
Mar-y-cel	4.23	8.47	12.33	16.57	20.27	23.52
Otgadai	4.30	9.10	13.34	18.94	22.40	26.29
Jan. II.	5.13	13.40	19.18	23.10	28.35	34.13

Mar-y-cel's speed—37.7 M. P. H.
Last year's record—Albany—30.6 M. P. H.

EXPRESS CRUISER RACE—10 MILES

Raven III	6.28	12.34	18.31	24.15
Shadow III	6.29	12.35	18.32	24.17
Boomerang	6.27	13.37	20.64	27.51

Raven III's speed—24.7 M. P. H.
Last year's record—Betty M—24.38 M. P. H.

Phil Rader in a Curtiss Military Tractor won a 10-mile race against a Curtiss Hydroaeroplane at speed of 78.64 M. P. H.

Roger Jannus made an altitude flight of 8500 feet with Miss Elsie Alexander of North Carolina as a passenger.

Second Day's Race

The same wonderful weather greeted the opening of the second day's racing, although the wind was a trifle stronger and there was a little more sea running. The crowds turned out in even larger numbers than the day before and the shore was thick with automobiles while the grand stand was a welter of color created by the bright array of the hundreds of ladies present.

Promptly at 2 o'clock the displacement race started and Mar-y-cel, Otgadai and Baby Glenn got away in splendid style. Otgadai held the lead to the first turn but from then on Mar-y-cel pulled out ahead and kept a comfortable lead to the finish, her big Duesenberg engine apparently having an easy time of it. Otgadai "did her darndest" but she had a hard handicap to overcome. Baby Glenn made two laps then dropped out with engine trouble. The time of Mary-cel was not as fast as the day before, partly owing to the heavy sea running at the lower end and partly because Mr. Deering wanted to have the boat in perfect shape for the big race the following day. Fred Duesenberg steered the boat throughout race.

Again the express cruiser race furnished the thrills of the afternoon. Carl Fisher went after the express cruiser record, and got it, although Com. Kotcher gave him a run for his money that will go down in history. The start of the ten-mile race was made promptly at 2:45 and the boats made a wonderful start. A line drawn across the three boats would have touched each one of their bows at the same time. Kotcher got to the first turn and held the lead around the first three laps, although Fisher was right on his tail every second. On the first turn of the last lap Fisher made a closer turn and as they came down by the grand stand on the outer leg the nose of the white boat just began to edge out from behind that of the black one and the people in the grand stand and along the shore just went crazy; hats went up in the air and people cheered, making a good imitation of the greeting Ty Cobb gets once in a while at Navin Park, Detroit. The boats held neck and neck with Shadow slightly in the lead to the lower and last turn, and here Fisher gained a boat length on Kotcher and they came up the back stretch in that position and finished with Shadow just eight seconds ahead of Raven, having covered the ten miles at an average speed of just 29 miles an hour. Mr. Huston Wyeth in the Boomerang made a sporty run for third place, but the old Boomerang only had half the power of the other fellows and found it an impossibility to keep up the pace, although her owner kept her trotting at the limit of her speed and the other two boats just had to keep moving or the old consistent war horse would have come along and trimmed them.

Aquaplane events proved very exciting and spectacular and the crowd thoroughly enjoyed watching them. There was just enough sea running to make things interesting and the three men that took part in these events had some spectacular and undoubtedly, rather painful tumbles.

Roger Jannus with Miss Florence Tatum as a passenger in the Curtiss Military Tractor attained a height of 8,700 feet The ascent was wonderful. The machine could be seen climbing away up there in the clouds and when it began to make a spiral descent in long graceful glides the crowd stood fascinated by the sight and marvelled at the control evidenced by this demonstration.

SUMMARY DISPLACEMENT RUNABOUT RACE—TEN MILES—FEB. 16, 1917

Mar-y-cel	4.32	9.02	13.44	18.21	32.6 M. P. H.
Otgadai	4.36	9.16	13.53	18.30	
Baby Glenn	4.58	9.27	d. n. f.		
Jan. II	d. n. s.				

EXPRESS CRUISERS—TEN MILES—2.45 P. M.

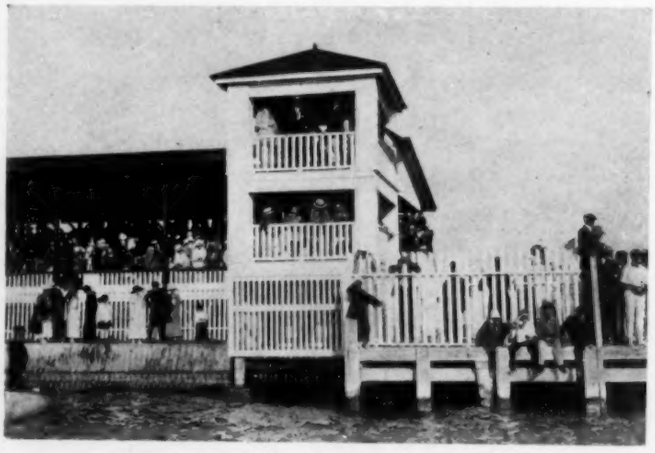
Shadow III	5.14	10.24	15.34	20.41	29 M. P. H.
Raven III	5.09	10.19	15.30	20.49	
Boomerang	6.24	12.49	19.18	25.43	

Time sheet signed by: Wm. M. Frisbie, Geo. W. Moore, W. Beauvais, Ralph Worthington.

Third Day's Race

The last day of the Regatta on the beautiful Biscayne Bay Course witnessed the setting up of yet another express cruiser record, as Shadow III owned and driven by Carl G. Fisher covered the ten miles in 19:56 at a speed of 30.1 M. P. H. Shadow III again defeated Com. Kotcher's Raven III, the boat that won the first day's race. This day's race was not quite as spectacular as was the one of the day before, the finish not being as close, Shadow III taking the lead right from the start and maintaining it throughout the race despite Com. Kotcher's frantic attempts to catch up with him. Both boats went faster than in the previous races, the weather being ideal for speed records. The crowd was delighted at the result of

(*Continued on page 244*)



THE JUDGES STAND AND PART OF GRAND STAND
JUDGES, E. C. McGRAW, WILLIAM TROBRIDGE AND R. W. WADMAN

Building a Sixteen Foot Knockabout

Being the Story of an Inexpensive Way to Own a Useful and Able Little Boat

By GERALD TAYLOR WHITE

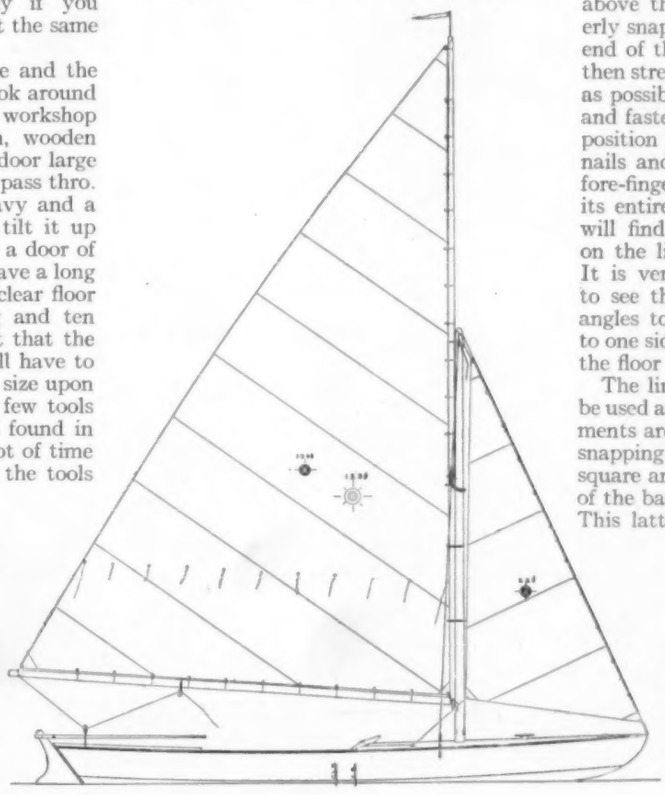
THE plans shown herewith are of a sixteen by five-foot sloop that was designed especially for amateur builders. Not only is she a remarkably cheap boat to build, but her design was worked out so that anyone who has a working knowledge of the simpler forms of wood working tools and an ability to read plans, can build a safe and seaworthy little boat.

This little boat is far from being a racing machine, it being the editor's orders that a seaworthy boat was preferred rather than a boat in which speed was the main question. Her specifications call for fairly heavy scantlings throughout, and at the same time her sail area of 123 feet is not enough to cause constant reefing on a puffy afternoon. In accordance with the editor's desire for a boat that would keep going in considerable of a chop, have made the cockpit small and on a boat of this kind this is not a bad point, for while under sail there is very little time when one could sit entirely within the cockpit.

An effort has been made to hold the cost down so that all materials could be purchased by the builder for a sum not over $50.00. This has been accomplished, and the complete lumber and hardware can be purchased in New York for a sum well under the figure stated, especially if you buy all materials as per the lists at the same time.

While waiting for the hardware and the lumber to be delivered you can look around and obtain the use of a good dry workshop where there is an even, smooth, wooden floor and be sure the shop has a door large enough for the completed boat to pass thro. The finished hull will not be heavy and a couple of husky men can easily tilt it up on one side, then it will pass thro a door of the usual size. The shop should have a long work bench, a strong vise and a clear floor space at least twenty feet long and ten feet wide. It is highly important that the floor be rather smooth for you will have to draw the lines of the boat out full size upon it with chalk. There are only a few tools needed outside of the usual tools found in most households. It will save a lot of time however if you see to it that all the tools are of good quality and be sure that all cutting edges are very sharp. It is impossible for even a professional boat builder to make a creditable job without good sharp tools, and surely an amateur should not try it. Your tool chest should include a rip saw, a cross cut saw, hammer, jack plane, smoothing plane, block plane, 1-inch chisel, ½-inch chisel and a hand drill with various sizes of drills as well as a ratchet brace with several sizes of wood bits. An 18-inch try square as well as a smaller one will be needed and also about 6 8-inch screw clamps. The latter are used to hold the various parts together before fastening. Aside from the regular fastenings mentioned in the hardware list you will need ½ pound of 1½-inch bright brads and a pound of 2-inch wire nails, several sheets of No. 2, and a dozen sheets of No. 1 sandpaper, as well as paint and varnish brushes. This will complete the tools needed for the actual building. For laying the lines down on the floor you will need a 20-foot chalk line, a plumb bob, several pieces of chalk and two wooden battens. The battens are to be about twenty feet long, ¾-inch wide and ½-inch thick. They must be of clear material such as white pine and planed off so as to bend easily and smoothly. The battens are used in drawing the curved lines on the floor.

Before attempting to do any of the constructing, read through this article several times so as to become familiar with the various steps and also, study the plans fully. If any part of the drawings seems obscure, study it, and compare with the article and the specifications until the point in question has been cleared up. Do not attempt to construct the boat if the drawings are not perfectly clear. If, after study there is still some point that seems vague, either write me or write the editor of YACHTING and we will do all in our power to set you on the right course.

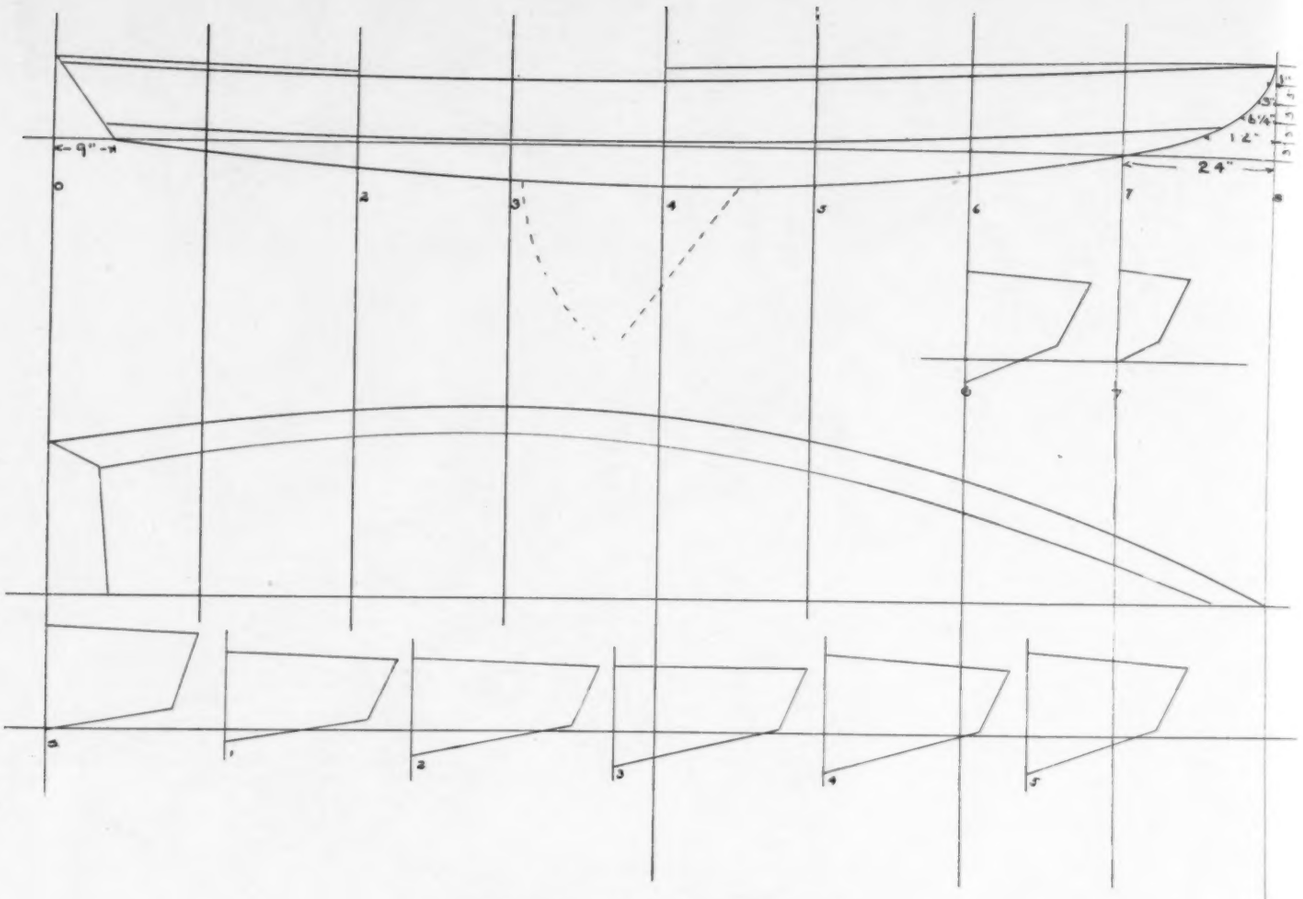


OUTBOARD PROFILE AND SAIL PLAN

It is likely that a professional boat builder would not bother to draw the lines of this boat full size on the floor, but it will be much easier for the amateur to make a good job if he takes the time to properly lay down the necessary lines. You will notice that the plans show two separate sets of lines. One set is drawn to such scale that it shows the boat in all her proper proportions. The other is what is known as a set of contracted lines. That is; the measurements of all widths and heights are drawn to a scale of 3-inch in a foot, but the lengthwise measurements are contracted to a scale of 1-inch to a foot. A little thought will show you that the chance of error is only ¼ of what it would be in the case of the lines being drawn to a scale of 1-inch to the foot in both directions.

The first step preparatory to laying the boat down is to clear and clean a space on the shop floor about eighteen feet long and four feet wide. Now rub some chalk on the chalk line and stretch it tightly from end to end of the cleared space about 1 foot above the edge of the clearing. To properly snap a chalk line you should fasten one end of the line to the floor with a nail and then stretch the line along the floor as tightly as possible to the other end of the clearing, and fasten it at that point. Now take up a position about half way between the two nails and lift the line between thumb and fore-finger until it is clear of the floor for its entire length, and then let it go. You will find that the chalk that was rubbed on the line will be transferred to the floor. It is very important in snapping the line to see that you lift it up exactly at right angles to the floor. If you pull it a little to one side you will have a curve snapped on the floor instead of a perfectly straight line.

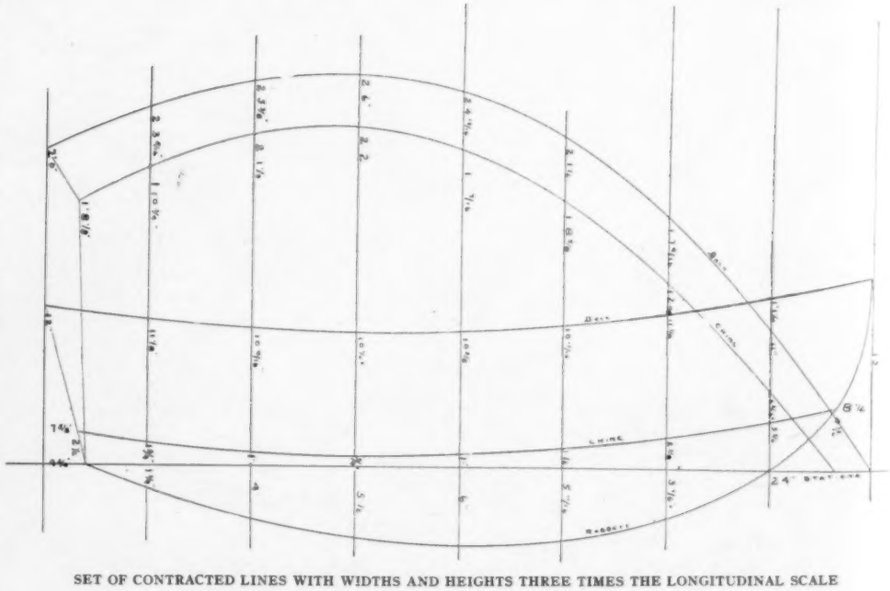
The line that you snap on the floor is to be used as a base from which all the measurements are to be made, so take great care in snapping it. Now take the large steel try square and draw a line at the left hand end of the base line exactly at right angles to it. This latter line should be sufficiently long to extend about 3 feet above the base and 1 foot below the base. Mark this perpendicular line Station No. 0. Now exactly 24 inches to the right of Station 0 draw another line at right angles to the base. This will be Station No. 1. Repeat this operation until you reach Station No. 8. Now check over all the distances from Station No. 0 and see if they are all exactly 2 feet apart, and if Station 8 is exactly 16



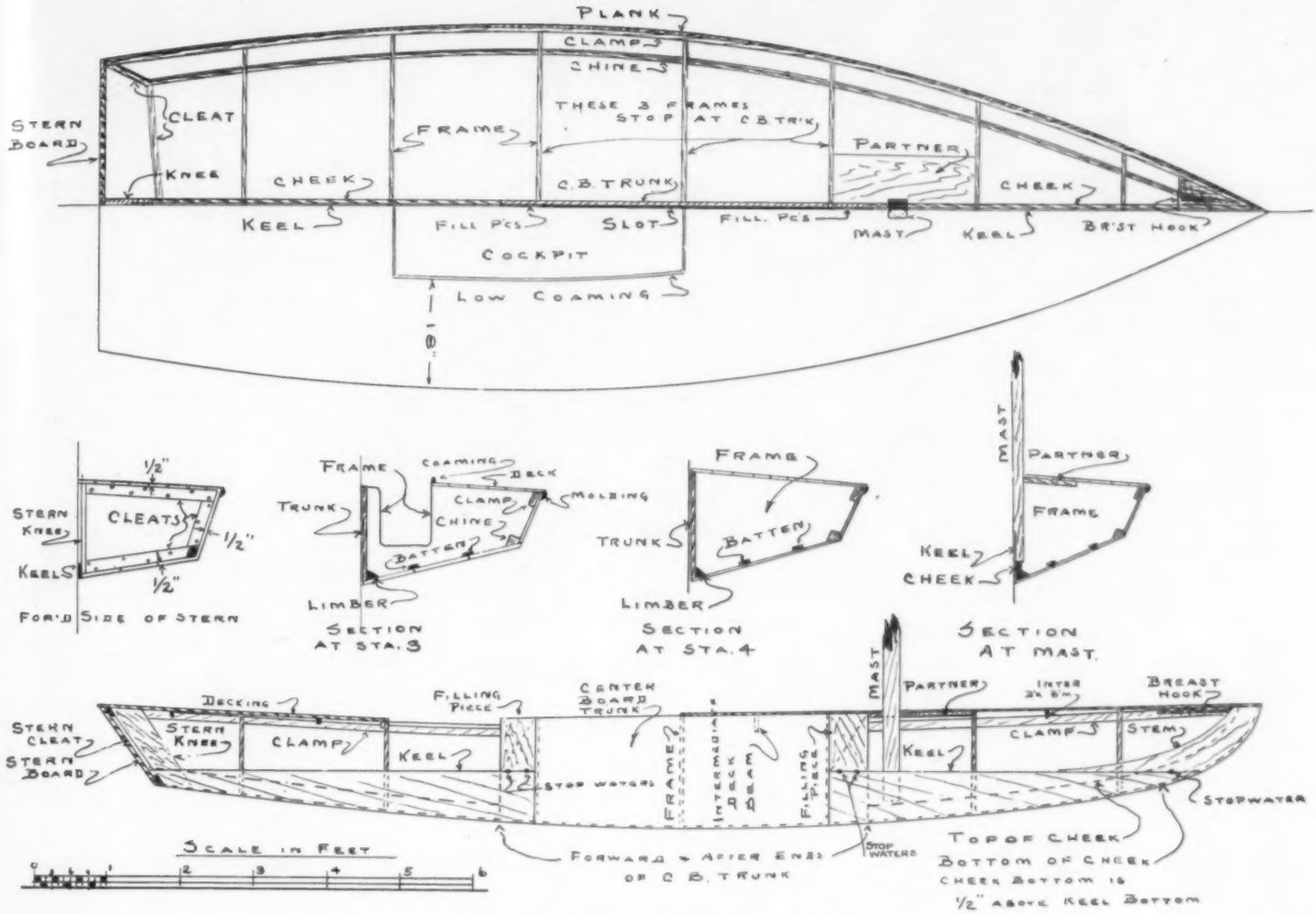
LINES SHOWING PROPER PROPORTIONS OF HULL

feet from Station 0. You will find that it is necessary to sharpen your chalk to a chisel point in order to get a fine accurate line. You are now ready to draw the line that will represent the sheer of the boat.

Take a two-foot rule and lay off a measurement on Station 0, 12 inches above the base. This will represent the top of the transom or stern board. On Station No. 1 lay off 11⅛ inches, Station No. 2, 10⅞ inches; Station No. 3, 10¼ inches; Station No. 4, 10⅜ inches; Station No. 5, 10⅛ inches; Station No. 6, 11⅞ inches; Station No. 7, 1 foot 1¼ inches; and Station No. 8, 1 foot 3 inches. You will now have a point on every one of the station lines. Take one of the long thin pine battens and lay it on the floor with the ¾-inch side down. Tack the batten to the mark on Station No. 3 with one of the 1½-inch brads, taking care that the brad is not driven in so far that it cannot easily be drawn out with the claw hammer. In tacking the batten to the floor the upper edge should be just even with the mark you placed on the station line indicating the sheer height at that point. Now tack the batten at all the other stations in the same manner, starting at No. 3 and working towards the ends. When all the stations have had the batten tacked to the marks, stand at one end of the lay-out and sight along the batten. If the measurements have been properly made the batten will show a fair even curve, without sudden humps or hollows. In case the batten does not bend in a fair curve, draw the brad out at the offending point and see if the batten will not spring into a correct sweep of its own accord. In some cases it will be found that two or three brads will have to be drawn before the batten will show a perfectly fair curve. If you find that the batten will not come within ¼ inch of any of the points and still be fair, carefully check up the measurements above the base. When the batten is satisfactorily sprung refasten at any point where you had to draw the brad, and then sharpen a piece



SET OF CONTRACTED LINES WITH WIDTHS AND HEIGHTS THREE TIMES THE LONGITUDINAL SCALE



THE CONSTRUCTION PLAN, SECTIONS AND ELEVATION

of chalk and draw a line from end to end, holding the chalk against the batten as a rest. Be sure that the line runs through every point marked.

Next will come the line at the stern of the layout that shows the rake of the stern board or transom. This line touches the sheer line at Station No. 0 and the base 9¾ inches to the right of Station No. 0. The curve of the stem comes next. To get this curve properly, lay off on Station No. 8 five marks, each three inches apart. In other words divide the distance between the base and the sheer at the bow into five parts. At the first mark, 3 inches above the base, measure 12 inches parallel to the base and to the left. Mark the point. At the next mark which will be 6 inches above the base measure off to the left 6¼ inches, next 3 inches, then 1 inch. Now sweep this curve in with a batten. As this curve is more abrupt than the sheer line, you will have to plane the extra batten down considerably in order to bend it around. It should cross the base line at Station No. 7 and should continue to Station No. 6, where it should be fastened at a point 3⅞ inches below the base. Mark this curve with chalk after being sure that it is fair and even. The line representing the bottom of the keel comes next. This line intersects the base at the lower end of the transom line, is 1¾ inches below the base at Station No. 1; 4 inches below at No. 2; 5½ inches at No. 3; 6 inches at No. 4; $5\frac{13}{16}$ inches at No. 5; 3⅞ inches at No. 6; where it will run into the curve of the stem.

Next comes the chine line. This line intersects the transom 2½ inches above the base, and is 1¾ inches above at No. 1; 1 inch at No. 2; ¾ inch at No. 3; 1 inch at No. 4; 1½ inches at No. 5; 2⅜ inches at No. 6; 3¾ inches at No. 7 and $4\frac{11}{16}$ inches at the stem curve. This completes the laying down of the profile lines of the boat. By studying the set of contracted lines you will see that the plan lines are drawn on top of the profile lines, the base of the profile lines serving as the centerline of the plan lines. Do the same on the floor, or you can clear off another space and snap down a new line for the centerline. The former method is much simpler and will probably save error in spacing off new stations. The first plan line to draw is the deck line. This line is 2 feet above the center line at No. 0; 2 feet $3\frac{5}{16}$ inches at No. 1; 2 feet 5⅜ inches at No. 2; 2 feet 6 inches at No. 3; 2 feet $4\frac{13}{16}$ inches at No. 4; 2 feet 1½ inches at No. 5; 1 foot $7\frac{9}{16}$ inches at No. 6; 11 inches at No. 7 and intersecting with the center line at No. 8. The chine plan line is 1 foot $8\frac{1}{8}$ inches from the center line at a point 9¾ inches from the Station No. 0. At Station No. 1 it is 1 foot 10¾ inches wide, at No. 2, 2 feet 1¼ inches wide; at No. 3, 2 feet 2 inches; at No. 4, 1 foot $\frac{7}{16}$ inches; at No. 5, 1 foot $8\frac{5}{8}$ inches; at No. 6, 1 foot $2\frac{3}{8}$ inches; No. 7, $6\frac{3}{16}$ inches and it touches the center line at a point 8½ inches aft of No. 8.

You have now completed the laying down of the boat. The next step will be to transfer some of the lines from the floor to the lumber and actually start the carpenter work.

Specifications for Sixteen-foot Knockabout

Keel—The material for the keel plank is to either be white oak or very clear, straight grained piece of yellow pine. It is to be finished ⅝ inch thick. The board must be at least 9 inches wide and 11 feet long. Stopwaters are to be placed in the seams where there is any danger of a leak. As the stem and stern knees are to be formed by the keel plank there is no need for regular stem or stern knees, however on each side of the keel plank at the bow there are to be fastened cheek pieces which will be bevelled down so as to form a back rabbett for the forward ends of the planks. On each side of the keel plank at the stern there are to be two similar pieces to which the transom will screw. These pieces are to be made from the same stock as the keel and are to be 4 inches wide for the stern pieces and 2½ inches wide for the cheeks.

Cheek Pieces—The cheek pieces are to be fitted on each side of the keel as shown, running from the stem head aft to the transom. The cheeks are to be made from ¾-inch oak or yellow pine, and are to be 2½ inches wide. They serve as a rabbett for the garboard planks. When fastening stern pieces and cheeks to the keel there must be a thick coating of white lead smeared between the keel and the pieces.

(*Continued on page 244*)

Under Sail

An Account of a Voyage Around Cape Stiff to Honolulu and Return in One of the Last Big American Windjammers, the Ship A. J. Fuller, as Told by One of Her Foremast Hands—Stormy Days off Cape Horn, Headed North.

By FELIX RIESENBERG

CHAPTER XVI

Stormy Days

"DIEGO RAMIREZ ahead, a point on the port bow!" This was the news that greeted us as we turned out on the morning of July 17, 1898. It was Sunday, cloudy, but clear; one of the first days without snow or hail since the Fourth of July. Off to the E. S. E. was a sail and by the long time it took us to raise her we knew she, too, was a homeward bounder.

The morning watch had set all of the tops'ls, shaking the reefs out of the fore and main, and we were sent aloft to loose the main t'gans'le, sheeting home and hoisting away with a will. As we raced along under the lowering gray, the rocky islands of Diego Ramirez stood out with the distinctness of cameos cut against the light skyline to the northeast. The breaking and dashing of the white frothy seas marked them well and served to remind us that we were plowing in a fairish sort of a seaway ourselves. Our added sail made the riding better and we hove the log after getting the t'gans'le on, showing a speed of ten knots.

As it was Sunday, there was no objection to our doing some sightseeing. I got the ship's head from the wheel house and went forward and made sketches of the island—the first one, bearing north, magnetic. This gave a continuous line with a cleft near the eastern side. A few minutes more and the cleft opened up, showing Diego Ramirez to be at least two separate islands. My sketches were made on N., N. N. W., and N. W.

Australia also got busy with his case of crayons, for he was an artist as well as a story-teller, and his sketch of Diego Ramirez is one of the most cherished souvenirs in my scrap-book.

All hands gazed at that bit of weather-scarred rock jutting up from the troubled waters with a feeling of reverence. It was the turning point, the high tide of distress on many a hard voyage into those stormy waters. Kahemuku and Black Joe watched it with a sort of fascination. No green-capped cliffs with white cataracts dashing into a warm, deep sea, as at their native islands of Hawaii. Not a scrap of verdure, not a ray of hope, only black blue water and sullen sky with between them the primal crags rearing their worn heads above the sea.

Since John Aahee was lost, the brown-skinned brothers had merely suffered to exist. They talked much together, and Aahee was mentioned constantly. We did our best to cheer them, though, to tell the truth, we all felt the death keenly. To starboard they missed him more than we. Second Mate Tom was, of course, blamed by the fo'c'sle judges, though he had nothing to do with the accident, any more than having been on deck at the time.

As we quickly dropped Diego Ramirez on the quarter, we went below at noon for our dinner. The day was incredibly fine for that season and we made the most of it. We were then tearing past the south point and would soon get northing into the course. Cape Horn lay far below the horizon to the north, and from the progress we were making we had hopes of establishing a record—for the Fuller at least. We had made the run from Honolulu to Diego Ramirez in forty-five days; as a matter of advance information to the reader, it took us sixty-three days more to sail from Ramirez to the Delaware Capes. Our passage as a whole merely proved a very fair one of 108 days, against 121 on the passage out. This difference of thirteen days in favor of going east can be attributed to the westerly winds off Cape Horn. From this it will be seen that the ship A. J. Fuller was not the fastest craft afloat, and yet she was far from being the slowest.

The sail ahead of us proved to be a Norwegian bark. We came up to her in handsome style, our ensign snapping from the monkey gaff, and as her colors went up we "dipped" in the long, graceful salute of the sea. The bark made her number and asked to be reported. She was droughing along at a slow pace under courses and upper and lower tops'ls. We were then under all plain sail to royals and must have made a glorious picture to the sailors lining the sides of the square-head craft. Moments like that make one tingle with pride at the sight of the colors, a sort of pride that seldom comes to those who sail under the flag in these degenerate days.

From Diego Ramirez we shaped a course to take us well clear of Staten Land. The familiar sound of this name was like home, and I found myself talking about it in the dog watch with peculiar relish. Old Smith of starboard joined us, and told of having run through the Strait of Le Maire on the passage to the eastward. This is safe enough, though careful skippers like Captain Nichols prefer the wider reaches of the Atlantic to the Le Maire Strait, dividing Staten Land from the larger island of Terra Del Fuego.

As we brought the wind about two points abaft the port beam, the sky started to thicken and during the early watches of the night we were again treated to real Cape Horn weather. At midnight we took in the lighter canvas, reefing the main t'gans'le. By eight bells in the midwatch we had her staggering under reefed fore and main upper tops'ls, lower tops'ls and reefed fores'le, fore topmast stays'le, and reefed spanker. We were making heavy weather of it, the seas dashing high over the fo'c'sle head as she buried her nose whenever a big roller tumbled in under the counter.

There was no warm breakfast, Chow having been flooded that morning by a heavy sea. The door to the carpenter shop was stove in and poor Chips was in a state bordering on hysteria, with all of his tools wet. To add to our woe, and looked upon as a sign of bad luck by all hands, the parrot was drowned when his cage unshipped from the hook under the fo'c'sle head and he was deposited in the scuppers. He lay there all night and was picked up by the starboard watch in the morning. Poor Jake! Of all the birds that ever cruised on stormy water, you were the unluckiest as well as the most profane.

Everything was afloat fore and aft. The fo'c'sle was swimming, and the after cabin was also washed out when a storm shutter was carried away from one of the ports. Brenden, Frenchy and I were called aft during our watch below on Monday forenoon and told to swab up the captain's quarters. We worked the better part of an hour in these palatial spaces, our caps respectfully tucked into our pockets. The captain gave us a large tin of cabin roast beef, and a half can of fine pilot bread, a reward for our trouble. Of course, we shared this forward, and we had a rather elaborate spread that noon; a clammy cracker hash which we threw overboard, hot slops, and the grub from aft.

"Give me meat like this and they can take my watch below any day," was Frenchy's opinion of the canned roast beef. At about the same time, no doubt, many of our soldiers were dying of this stuff under the hot sun of Cuba—they called it embalmed beef.

Ramirez is in 56 degrees 29 minutes south, corresponding in latitude to the Wrangel Astronomical Station, just south of Sitka, Alaska. When we remember that the Antarctic winter is even more severe than that of the northern hemisphere, it will be possible to get some idea of the state of the sea through which we were racing. Running north between Staten Land and the Falklands we encountered a succession of storms that were calculated to impress us with the quality of the Cape. We were under shortened canvas most of the time, and as the winds became very unsteady we were compelled to wear ship frequently, the great seas making it difficult to attempt to put her about in the eye of the wind.

My journal entries follow, covering the last two weeks of heavy weather, shifting winds, and great cross seas; a period of cold and wet without parallel on the voyage.

July 18, 1898—Wind hauled to S. E. at

ONE OF THE CAPE HORN FLEET, GRAIN LADEN, FROM THE NORTHWEST COAST TO QUEENSTOWN FOR ORDERS

end of day. Yards sharp up on starboard tack. Heavy snow at nightfall. Cold. Saw some small cakes of pan ice. Wind stronger.

July 19—Snow, hail and ice all over decks. Wind moderate, from S. E. as before, veering a point at noon. Braced in yards. Set topgallant sails. Overhauled another homeward-bound bark: could not make out her colors.

July 20—No snow today, but very cold. Are heading N. N. W. Wheel from four to six during washdown; glad to get out of it. Passed between Falkland Islands and main land today: no land in sight. Wind holding steady.

July 21—Colder today. Wind freshening. Furled fore and main upper topsails in the midwatch. Heading N. N. W., starboard tack. Looks bad. Rigged life lines today.

July 22—Wore ship in morning watch, set upper topsail and main sail. Ship under fore and main topsails and two courses, fore topmast staysail and spanker.

July 23—Warmer, but still cold enough for my monkey jacket. Weather puzzling. Old Man seems worried. Told me we were a long way from home; I know it.

July 24—Sunday—Wind unsteady. At braces most of day. Calm in afternoon. Got orders to shorten down to reefed topsails. Caught two cape pigeons in dog watch. Let one go and took wings of best one. Glass falling. Got up rolling tackles. Steadied out life lines. All hands forward hope the Skipper has made a mistake. Funny sky to the south.

July 25—Wind jumped out of the south last night. Heavy sea running. Colder than before. Sleet in the wind. Under lower topsails and reefed foresail. Running fast. Shipping blue water.

July 26—Running with wind one point on starboard quarter. Sea came aboard in ports on port side, from mainmast to the poop. After cabin flooded again. Colder, hail all night.

July 27—Wind abating. Got sail on her to topgallant sails. High sea running. All hands standing by. Ship yawing badly. Took in mizzen topgallant. Blowing up again at end of day, started to shorten down.

July 28—All hands took in the mainsail at 6 this evening. Called all hands at six bells in first night watch and took in foresail. Living gale. Under lower topsails and fore topmast staysail.

July 29—We hove to at daybreak. Got her around in the smooth and used a lot of oil to windward. Under fore and main lower topsails. We took in the mizzen lower as soon as she came around and set the mizzen storm sail. Fore lower topsail blown out of bolt ropes at noon. All hands on deck, aft on poop. Everything streaming to leeward. Captain rates wind at 11. Hail and sleet all night. Very cold.

July 30—Still blowing hard. Sent down remains of fore lower topsail and bent new one. Set this at four bells in afternoon. Wind moderating. Warmer.

July 31—Sunday—Gale dropped, day broke fine. Set all sail to royals. Warm. Had plum duff. Drying clothes. Are making ten knots and going faster as sea goes down. Deck wet, rigging forward full of clothes.

CHAPTER XVII

Headed North

"Well, for one, I am damn glad we are through with it," said Brenden during a discussion of Cape Horn weather that went on forward as we cleared out the damp fo'c'sle that wonderful Sunday following the gales. "This makes five times round for me and I hope to God the last."

"How far to Pillerdelphia?" chirped up Kahemuku, his face again approaching its natural brown, though lean and worn beyond all resemblance of his Honolulu poifed chubbiness.

"Ha! The Kanaka is coming to life!" kidded Australia. "Well, me brown brother and fellow shipmate, if I do call you that even though you are not white, Pillerdelphia is a long way off yet. The walking is bad and if I was you I would stay aboard a while longer. In fact you will have to ride all the way with nothing to do but work, me hearty, work."

All hands were feeling good. Black Joe hung around the galley all Sunday helping Chow, and for supper that night he was rewarded by a large sea pie, one of the bright red confections made of the mysterious "pie fruit." A chemist might analyze it as a composition of apple peelings, glucose, acetic acid and aniline dye. My, but how good it did taste! The human system demands its poison. Folks ashore prefer theirs in the most expensive form, while we poor sailors on the ship Fuller on that memorable voyage in the year of the great war with Spain, took our weevils, which are no worse than Roquefort, only larger, and

relished them. We ate many cockroaches browned in the cracker hash and dandy funk and drank their extract in the tea and coffee, beverages, so called, for want of other proper names. As for the sea pie, it acted as a corrective to the ginger bread. When Shakespeare said, "What's in a name?" he had certainly never experienced such a voyage as ours.

Following our dose of weather we entered upon a spell of work that carried us well up to the latitude of Cape Frio. The gear had to be overhauled in all of its details; whips of braces shifted end for end, new chafing mats and battens seized on to the stays to take the place of those worn through, and the slack standing rigging set up. Our own gear, the clothing of the crew, was sadly in need of attention, and every dog watch found the fo'c'sle busy with thread and needle. Frenchy was our top-notch sailorman at sewing. He could ply a needle with the best housewife that ever swapped a bit of scandal at a sewing bee. He did not use a thimble, but handled a long coarse needle, pushing it through with the calloused end of his thumb, a simple and effective method for those gifted with the necessary toughness of cuticle. I had always wanted a pair of real seagoing canvas pants such as Robinson Crusoe must have worn before he skinned the historic goat; pants wide in the legs, and fashioned of well weathered stuff, soft and comfortable. My good shipmate constructed them for me. They were not beautiful, but being what was left of an old skysail, a veteran of many voyages, a romantic piece of canvas that had swept the starry paths on many a balmy night, dew-bleached and mellow, they meant much to me. These pants were very homelike, and I never was able to wear them out.

About this time Peter came in for a lot of joshing by the men of his watch. He had an old long-tailed oilskin coat given him by Chips, such a garment as is never worn by sailormen who have to go aloft, it being the sole prerogative of officers and idlers who never venture above the sheer pole. However, with second mate Tom on deck, many strange things happened, and Peter, the stiff tails of his long coat sticking out in the wind, would go up the rigging as unconcerned as if it was the recognized and proper thing for a sailorman to wear.

It happened that during a rain squall at the latter part of his watch on deck he was sent up to furl the main skysail, and we tumbled out just in time to see him going up the weather rigging with his long yellow tail sticking out above his legs for all the world like a huge cockroach. At the same time First Mate Zerk came on deck and stood aghast at the unusual spectacle.

"Come down out of that! Hey you! *Lay down!*" Peter heard and obeyed. "Lay aft!" "Yes, sir!" "Hey, Chips!" "Aye, aye, sir!" from Chips. "Bring a knife aft. Cut the tail off of this. Now!" Chips had trimmed a good two feet off of Peter. That looked fine. Now take off another foot. We want to have this fine fellow in style."

When Chips got through, after a lot of sarcastic criticism by the mate and laughter by all hands mustered in the waist, Peter looked like a well-trimmed bird. His jacket was so short that the drip from its end went into the top of his trousers. He made a move to pick up the discarded tail, no doubt thinking it would do to sew on as an extension. "No, you don't!" shouted the mate. "Throw that overboard, Chips! Now, go forward watch below. No, you don't," to Peter. "You lay aloft and furl that sail, my fine fellow, and show us what a starboard watch hand can do." Poor Peter lay up in a dismal manner and after a lot of shouting from the deck he came down and went below with a good half hour of his watch gone, all on account of the offending garment, showing that even at sea the correct thing in dress is essential; at least it was so in those strict old days.

As soon as warm weather struck us, the last remnant of our potato bin went bad, and were thrown overboard. When the old potato bin was knocked down we had a general clean up under the fo'c'sle head, a scrubbing and overhauling of the bo'son's lockers, the paint locker and the oil stores. The short half deck forming the fo'c'sle head was not high enough for a man to stand upright under it, the lockers being arranged along the sides up into the bow. In the very nose, next to the hawse pipes, were the toilets of the ship—that is, those for the crew. These were very wet and uncomfortable in heavy weather. They were kept scrupulously clean, however. Large oil tanks were provided above these, fitted with small copper tubes leading into the sea alongside of the forefoot of the ship. Small cocks provided for the release of oil in heavy weather.

When we were cleaned up forward, and ready for the last long spell of fine weather, with its round of marlinspike work, chipping, painting, tarring and holystoning, we were treated to a few hours of excitement that was different from the usual thing of that kind aboard the Fuller, as we had a chance to enjoy the show like spectators at the rail, and not as on most occasions when we saw the circus in the same way that the performers see it, namely, dangling from the flying trapeze near the top of the tent.

It was on a wet Friday morning; we were scrubbing deck paintwork when the wheel sang out, "Steamer ahoy!"

This was unusual and all hands were astonished at the closeness of a cloud of smoke that was tearing toward us from somewhere to windward. Captain Nichols came out on deck and got the long telescope to bear. He pronounced it a cruiser.

She was coming for us fast; suddenly she altered her course fully four points and came in under our stern. She was a dirty white streaked with rust, a fair sized armored cruiser, two funnels with a military mast between them.

"Break out the ensign, Mr. Zeck. Might as well show her who we are." Indeed, the cruiser was reading our name and hailing port on the broad transom in letters of shining gold.

"She's a Spaniard, one of them has a mast between two funnels," someone said. I remembered this, having in mind the pictures of the Spanish ships in West Indian waters, published in the magazines while we were in Honolulu.

"All out for Barcelona!" shouted the mate. The ensign went up, and we dipped. The cruiser ran up the Argentine colors, answered our salute and resumed her course.

"Hey, you loafers, get back on that paint work; this ain't no Spanish prison!"

Of course, we all grinned at the great humor of the joke, and began to rub with our brick dust rags; the starboard watch went below at once, for it was unhealthy to be seen standing around on deck during a watch below. We all knew that the afternoon below would soon be gone and hoped to stall off the day of doom as long as possible.

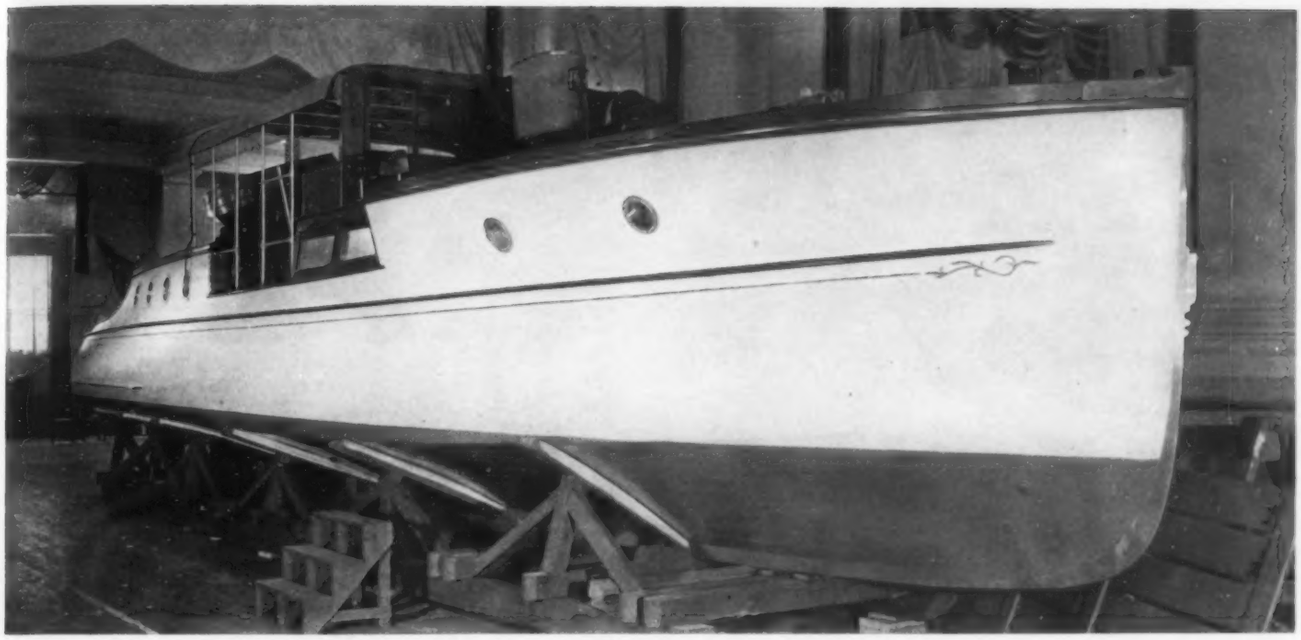
(To be Continued)

Status of the Yacht Ensign

The paragraph in YACHTING last month stating that the Bergen Beach Yacht Club, of Jamaica Bay, had adopted the United States ensign for its club fleet and to fly at the club house flag staff in place of the yacht ensign heretofore used, brought an inquiry from one of our readers as to whether or not the yacht ensign is a properly authorized flag under the U. S. Revised Statutes and the regulations of the Navy Department, and if it was not duly recognized as a U. S. ensign.

As the question is of general interest we would say in reply that as we understand the matter the present yacht ensign was approved by an Act of Congress many years ago as a yacht *signal*, no special mention having been made of the fact that it could be flown in place of the U. S. ensign. Since then it has been flown at the stern of yachts as an ensign until it has come to be regarded as such, but there is no official warrant or Act of Congress authorizing its use as an ensign in place of the American flag.

We understand that there is now pending in the Committee of Merchant-Marine Fisheries of the House a bill forbidding the use of any flag as an ensign for American boats except the American flag. Whether or not this bill will ever be reported out of committee we do not know, but at a critical time like this it would seem that a yacht club is justified in adopting the American ensign in place of the yacht signal if it so desires, although we do not think there would ever be any discussion of the proper recognition of the so-called yacht ensign—unless a boat flying one were sunk by a U-boat and the administration wanted to duck the issue.



HAVING ACCOMMODATIONS FOR A PARTY OF EIGHT PERSONS IN ADDITION TO THE CREW THIS V-BOTTOM 50-FOOTER HAS A SPEED OF 24 MILES AN HOUR SHE WAS BUILT BY THE GREAT LAKES BOAT BUILDING CORP., AND IS POWERED WITH AN 8-CYLINDER VAN BLERCK MOTOR

A Fifty-foot Military Express Cruiser

Although only fifty feet in length, the V-bottom express cruiser, designed and built by the Great Lakes Boat Building Corporation, Milwaukee, Wis. has four main compartments—crew's quarters, galley, forward cabin, and after cabin each with full head room throughout, besides an inviting cockpit of large size. The yacht will thus sleep eight people comfortably, besides a crew of two forward.

The power plant, consisting of an 8-cylinder 6 x 6 inch Van Blerck motor is under the bridge and completely housed and protected and yet each part is instantly accessible by means of removable hatches built in sections. The speed with this motor is 20 to 24 miles an hour. All controls, including electric starter, are brought to the bridge thus making it possible for the craft to be operated by one man.

Structurally the boat is extremely strong without excessive weight and is thus well adapted to the placing of two rapid fire guns for operation against submarines and air craft. There is full headroom throughout and the bridge deck amidships is well protected. She is beautifully finished and upholstered inside—is, in fact, complete in every detail.

Yacht Builders Get New Quarters

Wood & McClure, the well-known yacht builders of City Island, N. Y., who have turned out some of the best of the smaller boats in recent years, have just purchased the plant of the Holmes Shipbuilding Co., West Mystic, Conn., and will build at that place in the future, although it is possible that they may keep their City Island shop open also for repair work.

This move will give the Wood & McClure Co. much greater facilities for building as the Holmes plant is up-to-date and has a very favorable location with large water front. This should mean additional work for Wood & McClure.

Robert Jacobs of City Island, has taken over the building formerly used as a sail loft by Ratsey & Lapthorn, converted it into a joiner shop in which he is building at the present time two 55-foot high speed express cruisers from designs by Wm. H. Hand, Jr. These boats will be powered with Duesenberg motors and will have a speed of 35 miles an hour.

THE AFTER CABIN IS FITTED WITH EXTENSION BERTHS AND IS FINISHED IN WHITE AND MAHOGANY

LOOKING THROUGH THE FORWARD CABINS INTO THE GALLEY. NOTE THE BUILT-IN PHONOGRAPH ON THE STARBOARD SIDE

Some Principles of V-Bottom Construction

Details Worth Knowing About the Building of these Popular Boats.

(Continued from March number)

By VICTOR J. SLOCUM

THE moulding should be about three times the siding, some allowance being made in the way of having plenty of moulded wood at the knuckle of the frame, and a slight taper at the head.

The grain of each frame should be a continuous run from the center line of keel to the sheer line; the frames being connected at the keel by an oak floor timber. The floor timbers should be sided one and one-half times the siding of the frame, except in the way of the engine beds, where they should be twice the siding of the frames. In moulding the floor timbers, special care should be taken to have absolutely no cross grain. Line the top of the floor timber perfectly straight excepting where it might become necessary to cut out for engine installation. It is better to err on the side of weight in floor construction, for we are now dealing with the most vital part of the strength of a V-bottom. It is the solid floor that helps the most to make her stand the racket.

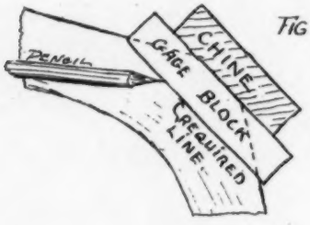


FIG. 9

The frames are fastened to the floor timbers by galvanized iron machine bolts, with sizes as follows: 18-footer, ¼ inch; 25-30-footer, ⅜ inch; 35-footer, ½ inch. Have washers under both heads and nuts. Make a job of bolting all frames together before setting up.

Up to the point of building the foundation and bolting together of the frame, the method of procedure is the same as on regular round bilge construction, the garboard and stem rabbets are worked just the same. and, too, as in all flat-floored hulls of moderate size, the usual practice is to set the work bottom up, as it is a decided advantage.

For the purpose of being more definite in our assumption, let us consider the process of setting up a 25 by 6 runabout, ribband carvel. Ribband carvel is the method of planking now most generally used.

In spite of all the care we may have taken in the moulding of the frame, an unevenness will appear when we bend a test batten around the knuckles. Brad the batten on true, keeping the batten down to the lowest corners in the true sweep, and marking the high corners to be reduced. When you see the batten on and cast your boat builder's eye along the curve you can see whether or not it is fair. After the knuckle line has been faired the next step is to work the chine.

No rule, except a general one, can be given for the exact section of the two elements of the chine, viz.: the chine piece and the filler. It may be taken from the architect's construction drawing, but it depends on two things: *a*, the angle of the section, and *b*, the thickness of the planking. *a* and *b* will therefore determine the values of *c*, *d*, *e*, *f*, and *h*. (Fig. 7.) Let us now make note of some of our working dimensions, taken from the detail drawing:

B=thickness of planking (½ inch).

C=inside face of filler (1 inch).

E F=total width and total thickness of filler (1⅝ by ⅞ inch).

D=thickness of chine piece (1¼ inches).

H=width of chine piece (3 inches).

What we want to know first is the value of *C*, the width of the filler where it comes in contact with the chine piece. That is enough to hold us down for a while. We cut an angle equal to 1 inch from the knuckle of every frame, and also from each knuckle of the transom. Use Fig. 8 as your guide, together with the following

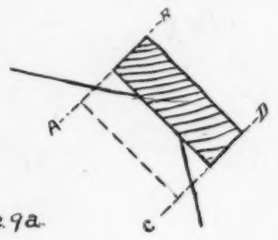


FIG. 9a

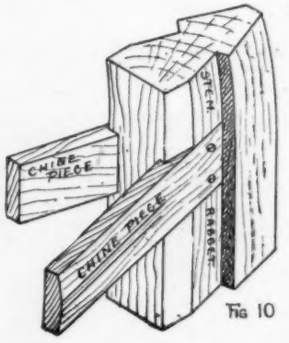


Fig 10

rule: Across each knuckle draw a line *a*—*b* equal to 1 inch, showing equal angles from *b*—*c* to *c*—*a*.

Turning back to the detail drawing, Fig. 7, we find that 1¼ inches by 3 inches is the thickness and width of our chine piece, or, rather, each chine piece, for there are two of them.

After steaming the fore ends for an hour, clamp them on their places and allow them to set. They will strike center to center every 1-inch angle, and fit into the side of the stem rabbet just as a plank would. You have another chance now to true up before taking another step; if a frame seems to be fat, run your saw under the chine piece and let it down until it falls into a true curve; if a frame turns out to be slack, shim it up until it looks right. Go easy on the shimming, however, for it is safer to work the other way. When each chine piece looks fair mark for the drop cut by using a gauge block equal to the thickness of the chine; in fact, the handiest thing to do is to saw off about ½ inch of the chine piece itself, and you will be sure to get it right. Don't be in a hurry about this marking process, but make a close study of the work and the sketches. Fig. 9 shows how to get the depth of the cut and it must be marked on both sides of each frame to give you the bevel. This is a direct method and takes but a fraction of the time required by the floor method of laying down. Use a hard and a finely pointed pencil when doing the

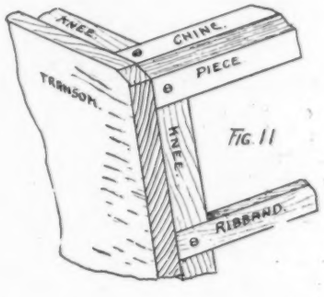


FIG. 11

marking, for we are at a place now where accuracy counts. The same method applies at the connection of the chine piece with the stem, and at the transom. Fig. 10 and Fig. 11, study these sketches carefully, Fig. 9a shows how, by drawing the lines *a*, *b*, *c*, *d*, the width of the cut at each frame may be obtained. By the time you have all this marking done you may safely let up on your gear and lay aside the chine pieces, for now they are set enough to retain their shape. A day's wait, however, would do no harm. When cutting, saw just inside of the lines with a fine back saw and remove waste wood by chiseling carefully from lines on each side of the cut.

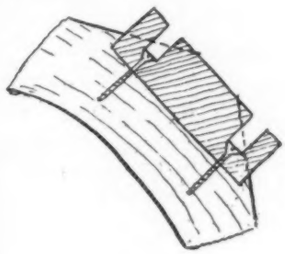
The method of letting in the end of the chine piece at the stem will suggest itself when you get to it, and I may as well caution you now that the after end of the chine piece is fastened to the transom knee entirely on the inboard side of the transom. (See Fig. 11.)

We are now at a point on the job where the remaining process of construction peculiar to V-bottoms can be divided into ten steps of progress, and, taken in their proper order, they are:

1. Fasten the chine piece in place.
2. Fair the entire framework.
3. Fit garboard strake.
4. Steam garboard strake and clamp in place.
5. Locate and work the ribbands.
6. Plank bottom to chine piece.
7. Fasten chine filler.
8. Space for side plank and work the sheer strake.
9. Work the side chine strake.
10. Work the remaining side plank and close with a shutter.

In taking up step 1, we fasten the chine piece in place by starting at the stem; do not saw off the after-end until you come to fit it into the transom frame. Use 1¾-inch No. 10 brass screws, and drive in two at each point of contact. (Fig. 12.) Care should be taken to countersink them sufficiently deep to allow trimming corners of chine piece after it is in place.

FIG. 12.

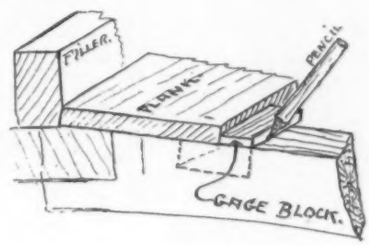


Step 2. With a long jointer, fair up the entire framework, making all connecting surfaces perfectly plain; fair up the face of the chine piece and leave the knuckle ridge 1 inch wide. This is your last chance (except one) to fair the chine piece.

Step 3. Make the garboard strake no wider than 8 inches, and fit into the garboard. In our V-bottom model all the plank will be found to line nearly parallel, but care should be exercised in spacing. All the forehoods fit into the stem rabbet and it will also be found that the bottom plank will average about 8 inches in width. There is no fear in V-bottom construction of running on the planking too wide (that is part of the fun), but there is a disadvantage in running it on too narrow. The ribbands hold the seams securely and the sawed frames furnish ample holding ground for center fastenings in the plank. An 8-inch plank should have at least two center fastenings. Inconvenience in spacing of ribbands and of forming butt fastenings make plank narrower than 6 inches undesirable. The butts are fastened to regular butt blocks that fit in between the ribbands.

Step 4. The quick twist of the bottom plank, due to the sharp entrance at the forefoot of the modern V-bottom, makes steaming of the fore ends necessary. The first idea of the V-bottom man was to get rid of the steam box altogether, and so he did

FIG. 13.



for a long time when he was not so fussy about the particular kind of model he wanted, or, rather, as long as he adapted the model to his particular kind of construction. But now that the V-bottom is invading realms not strictly its own, our old friend the steam box is with us again, merrily giving forth its familiar and pungent odors of boiled cedar and oak. And so, perforce, we must steam our forehood as of old, or it may split and give us a hellofatime while we excitedly grab the nib with the clamp.

Step 5. While waiting for the garboard to set, get out the seam ribbands, which for our boat will be 1¾ inches by ¾ inch, and then accurately locate the ribband by the method shown in Fig. 13. Make a gauge block half the width of the ribband (¾ inch) and gauge a fine line the width of the block from the edge of the plank on each frame, at the point on the stem rabbet and on the transom knee.

Remove the plank, clamp ribband to line made and mark opposite edge. When the

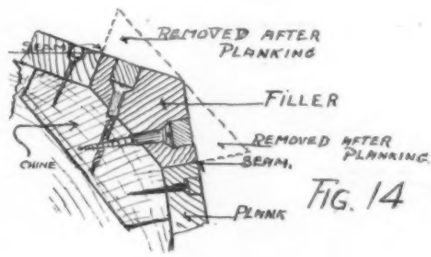


FIG. 14

ribband is clamped to the frames see that it flows in an even curve. If there is any unevenness, adjust the screw clamps. It may be found forward of the fore section, for instance, that the ribband has a tendency to straighten, thus making the lines of the bow too lean. Correction can be made by putting temporary spreaders inside, not between the ribbands, however, but independent spreaders, each one thrusting from some secure point on a section. In this way you may control, or, rather, put beautiful shape into your work as it forms before you.

The ribband is marked into place in exactly the same way as was the chine piece when it was let into the knuckles of the frame. It will be seen therefore that the ribbands will form the same kind of a curve when in its place as it did before it was marked down. Each ribband is a repetition of the chine piece idea, except that the ribband is simply set below the surface of the framework. The ribband is center fastened with a 1½-inch No. 9 brass screw. In the garboard all the keel and endwood fastenings are 1¼-inch No. 9 brass screws. The seam fastenings are 1-inch No. 8 brass screws, not more than 4 inches c. to c.

Step 6. Each succeeding plank on the bottom is worked just as the garboard was worked until the chine piece is reached. Plank directly to the knuckle line and fasten the edge of the chine seam just as on a ribband.

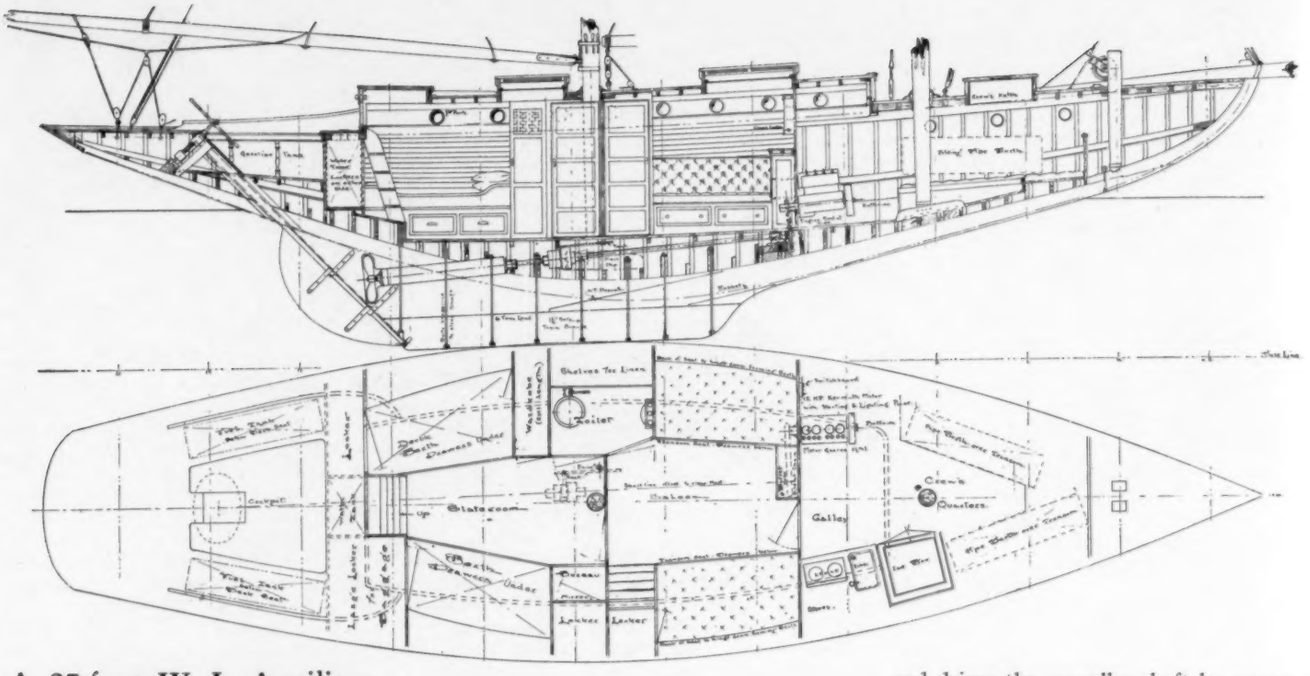
Step 7. The filler comes next. It is clamped securely to the edge of the last plank fastened, and held to the chine piece with 1¼-inch No. 9 brass screws. (Fig. 14.)

Steps 8, 9 and 10 are carried out in their order just as the bottom planking was. While planing off, the chine filler is worked down to both lines of planking and thus finds its own correct form of section.

The Class "R" Race For the Lipton Cup

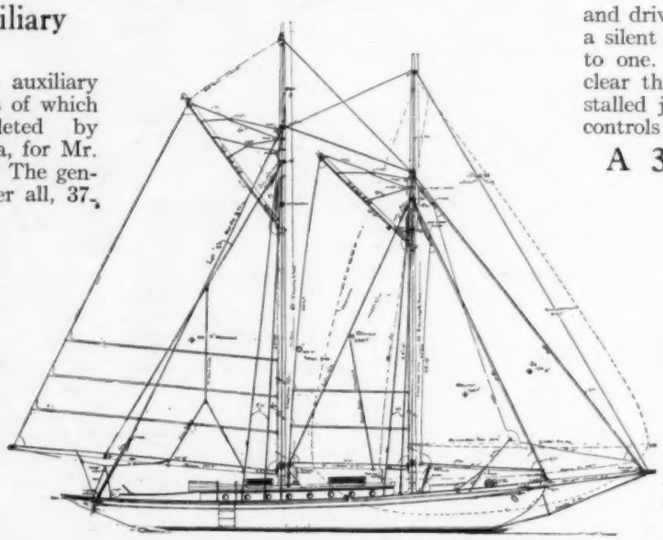
Since the Lipton Cup was turned over by the Columbia Yacht Club to the "R" Class to be competed for this summer, plans are going merrily along for a race between the Lake Erie boats and those on Lake Michigan. Pam owned by Commodore H. A. Parsons, Clarice, owned by Commodore Alex. Winton, and Mebleh, owned by Commodore W. R. Huntington are assured starters, while probably some of the other Lake Erie "R" boats there will also make the journey to Chicago to compete.

The dates set for this event are August 23, 24 and 25, and there will be three new boats on Lake Michigan waters to meet the visiting contingent. One of these is a new boat for Commodore O. T. McClurg, of the Lincoln Park Y. C., from designs by John Alden, a new boat for Mr. Samuel Dauchy, from the board of the same designer, and a new boat named the South Shore building for the South Shore Yacht Club, of Milwaukee. The Maia built in 1914, is also owned in the Lincoln Park Y. C. and will probably be in the melée. It will seem fine to see some good racing again for this cup, and the series bids fair to be one of the most interesting and important held during the summer yachting season.



A 37-foot W. L. Auxiliary Schooner

THE above plans show an auxiliary schooner yacht, the designs of which have just been completed by J. Murray Watts of Philadelphia, for Mr. Roger Young, of Newark, N. J. The general dimensions are: 53 feet over all, 37 feet water line, 14-feet beam, 6 feet 4 inch draft. The rig shows the modern type of pole mast schooner with plenty of sail, bold sheer and good freeboard, making a very sea-worthy craft.



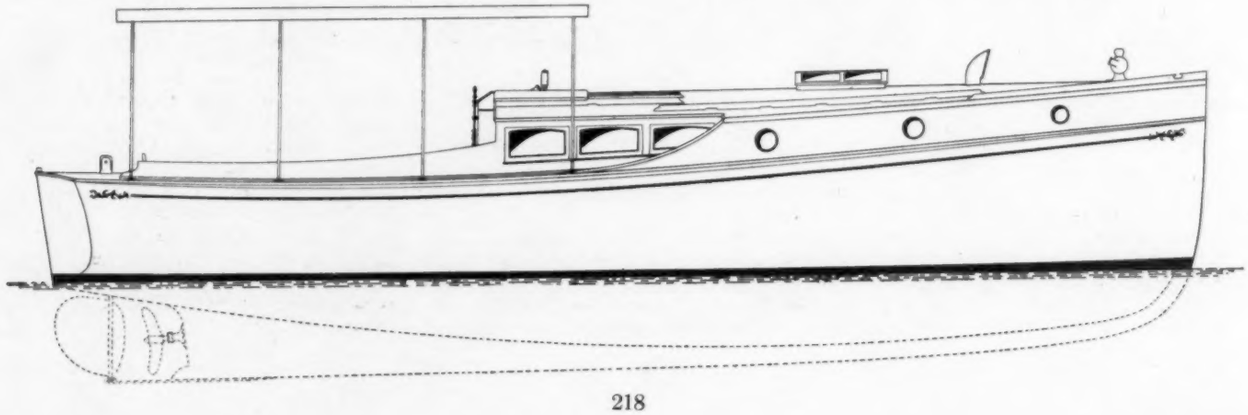
The general arrangement shows a good big stateroom aft with two wardrobe lockers, large baggage locker, and a bureau, as well as two double berths with drawers under. Forward of the stateroom on the port side is the toilet room with two doors, one opening into the stateroom and one into the saloon. The saloon has two big transom seats on either side with drawers below, a buffet forward and a set of companion stairs aft on the other side. A door leads from the saloon into the galley, and there are comfortable quarters for two men forward.

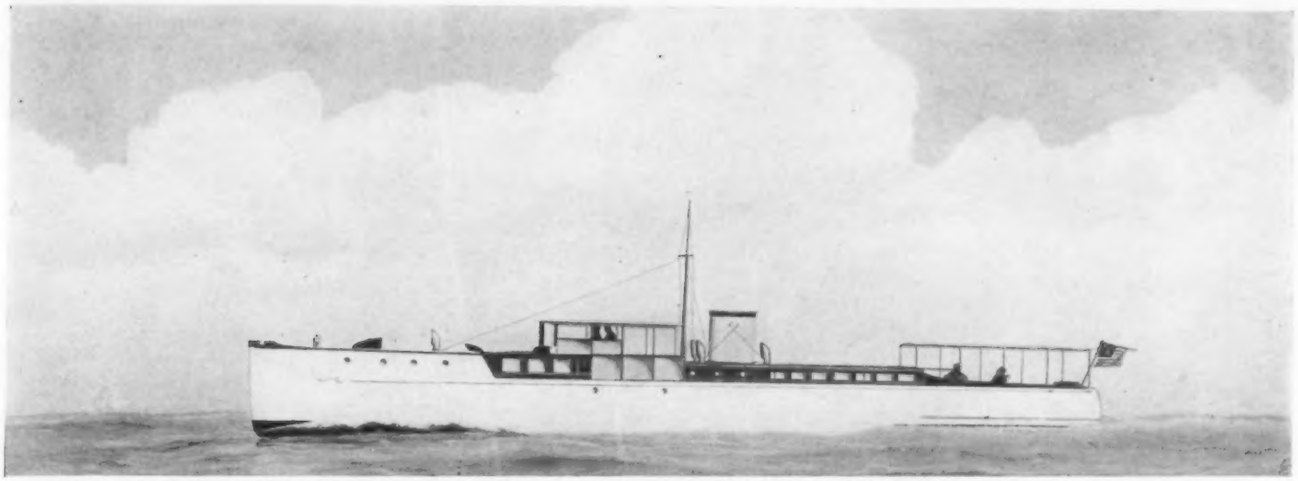
An interesting detail is the layout of the auxiliary motor. The motor is installed on a platform at one side of the forecastle and drives the propeller shaft by means of a silent chain geared down two and a half to one. The propeller shaft is off-set to clear the mainmast, and the clutch is installed just forward of the shaft log, with controls leading to the steering cockpit.

A 32-Foot Stock Cruising Power Boat

ONE of the biggest little power cruisers that we have seen for a long time is a 32-footer recently turned out by the Launch Exchange and Repair Company, the plans of which have recently reached this office.

The boat is not only a wholesome, good looking craft but her model is such as to ensure good weatherly qualities and she should be easy to drive. She is unusually well laid out with all the advantages of a double cabin, and yet so arranged that it is practically all one compartment preventing the cramped appearance of a small boat which is too much cut up.





THE 76-FOOT HIGH SPEED EXPRESS CRUISER GRETCHEN OWNED BY MR. ALBERT PACK, OF EAST CHICAGO, IND., IS BEING BUILT BY THE GREAT LAKES BOAT BUILDING CORP. AND WILL BE PROPELLED AT A SPEED OF 28 MILES AN HOUR BY TWO 400 H. P. DUESENBERG MOTORS

There is a large cockpit aft 9 feet 4 inches long and when one gets below, a lot of space is gained by having the motor under the forward end of the cockpit instead of in the main cabin, while only the flywheel extends forward of the after cabin bulkhead. The heads of the cylinders are covered by a hatch in the cockpit that makes a good seat and does not take up any valuable room.

The main cabin has a total length of 12 feet 6 inches; the first 6 feet being given up to galley, ice box, etc., with full length transom on the opposite side. Forward of this compartment are two sleeping transoms with backs that hinge up, making upper and lower berths. The compartment can be shut off entirely by a curtain, if desired.

Forward of this is a large toilet room with two clothes lockers, one 4 inches wide by 2 feet 7 inches deep. She will thus sleep five people below; each one in a separate berth.

Any power can be installed as desired, but a 4-cylinder motor of about 20 h. p. will give the boat a speed of around 12 miles.

Gretchen, a New 76-foot Express Boat

GRETCHEN, shown in the accompanying plans and illustrations, is a new high speed express cruiser 76 feet in length, which was designed and is now building by the Great Lakes Boat Building Corporation of Milwaukee, Wis., for Mr. Albert Pack, of East Chicago, Ind.

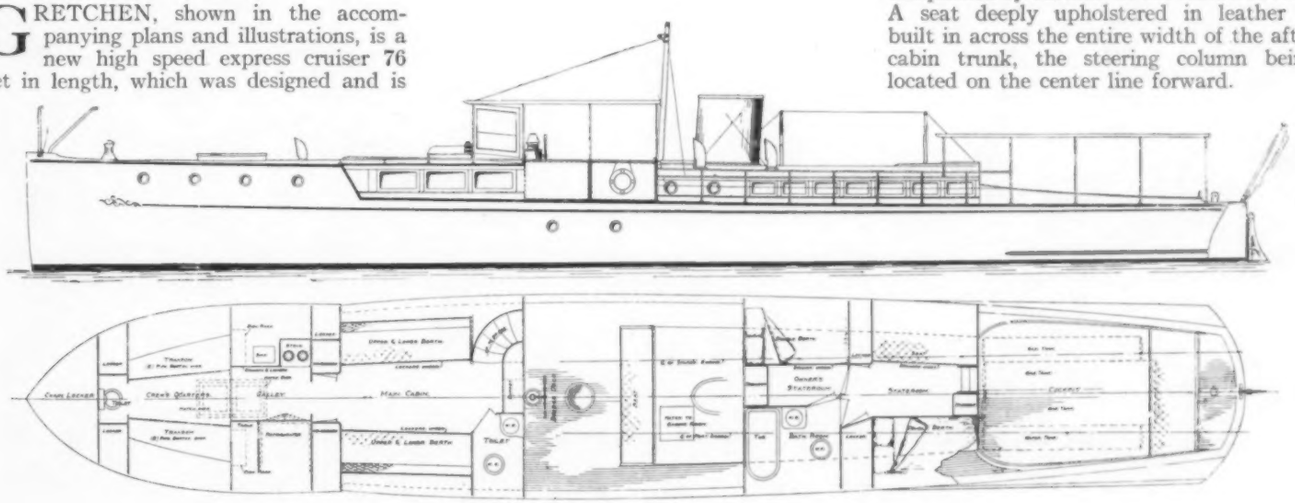
Experience gained by the construction of a long line of successful express cruisers has enabled the builders to assure the new owner of an unusual turn of speed, 28 miles per hour, in a big able cruiser whose accommodations, as will be noted, are laid out in most attractive manner in point of comfort and convenience.

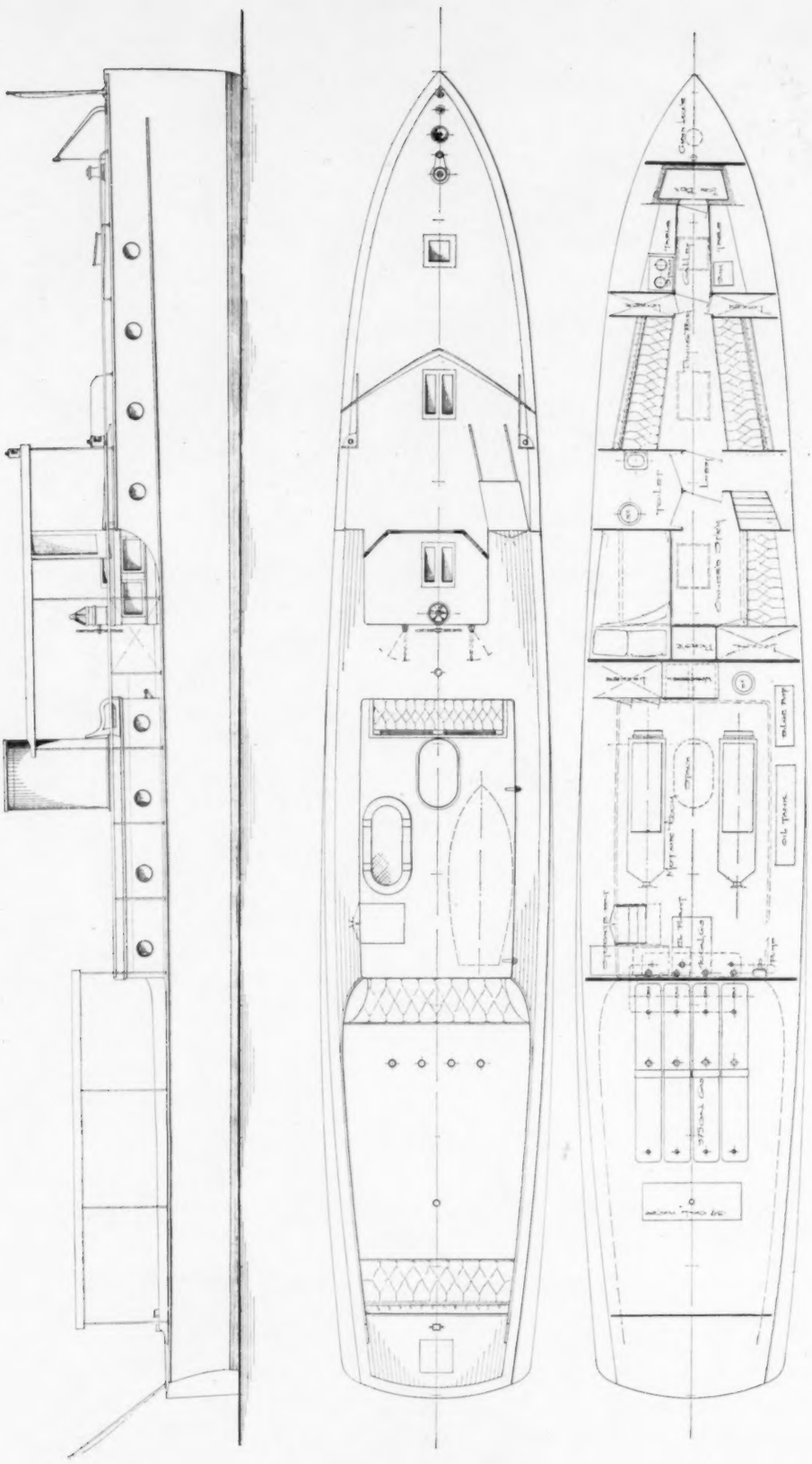
The hull construction is most interesting and worthy of special mention. Steam bent frames on short centers and longitudinal seam battens form the frame work, over which are applied two courses of planking. The inner skin is of cedar laid diagonally over the frames and battens. The outer course is of mahogany laid longitudinally with the plank seams centered on the battens.

In the forecastle, comfortable quarters are provided for a crew of four. Directly abaft the forecastle is an exceptionally roomy and well arranged galley with stove, large icebox and sink, with liberal provision made for dish and provision lockers.

The main saloon is a large and attractively arranged compartment, which is entered from the bridge by companionway stairs which are set inboard on an easy sweep. On either side is provided a long seat with high back, both seats and backs being upholstered over a deep box spring construction. Sleeping accommodations are thus provided for a party of four as the seat backs are arranged Pullman-fashion to swing up forming upper berths. In addition to a connecting toilet, hanging lockers on either side forward and a large buffet aft are also provided.

The bridge deck, due to its size, is a most attractive feature, being 8 feet in length and extending the full width of the boat—13 feet at this point. The bridge is made comfortable under any weather conditions by a heavily constructed awning extending well past the deck limits both forward and aft. The entire forward end is closed off by a windshield made up of heavy plate glass set in mahogany sash which is arranged to be raised and lowered at will. The complete enclosure of the bridge is accomplished by curtains at the sides and rear. A seat deeply upholstered in leather is built in across the entire width of the after cabin trunk, the steering column being located on the center line forward.





A 66-FOOT MATTHEWS EXPRESS CRUISER

The power plant is to consist of two 8-cylinder 400 h.p. Duesenberg engines made by the Loew-Victor Engine Company, Chicago. Each machine is equipped with such auxiliary units as electric starter, bilge, oil, air and fuel pumps, while a Matthews independent generating set will supply current for lights throughout the boat.

The accommodations provided aft consist of two private staterooms, both connecting directly with bath. Beds in both staterooms are of the box spring type, full double bed width. Each stateroom is provided with separate clothes lockers, dressers and drawers.

A 66-Foot Express Cruiser With Some Novel Features

About the last word in express cruiser design is exemplified in the 66-footer recently turned out by the Matthews Boat Company, of Port Clinton, O., for a New York City yachtsman.

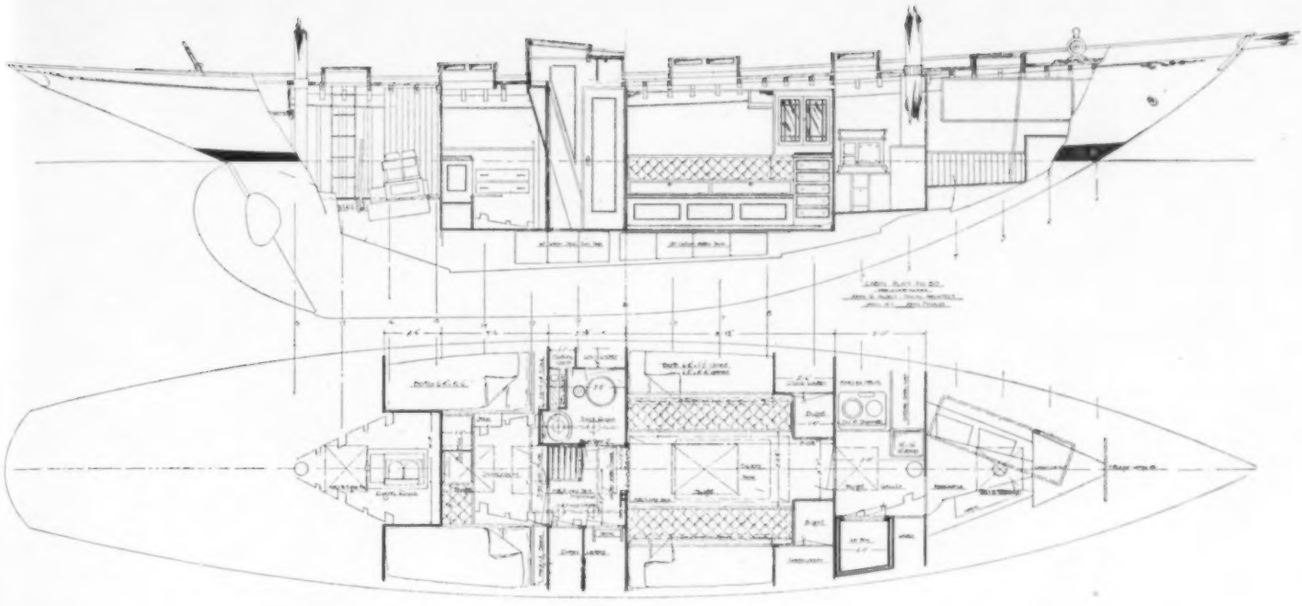
The boat is so unusual in many respects that her plans will bear close study. She is of the raised deck type, with rather a pleasing sweep to the sheer in place of the straight or hogged sheer we have become accustomed to, and the 'midship house has been carried out fairly wide, leaving but a narrow space on either side leading back to the after cockpit.

The engines, two 8-cylinder 5½"x6" Van Blercks, are located amidships under the house in a large well ventilated engine room, while the four Janney-Steinmetz seamless steel tanks are under the cockpit floor. These tanks hold 375 gallons each, giving a total fuel capacity of 1500 gallons. There is plenty of room to get all around the engines so that they are unusually accessible. In this compartment will be found, also, pipe berths for the crew and plenty of locker space.

The bridge deck amidships is protected by a wind shield and an awning on permanent stanchions, the entrance to the owner's quarters forward being by a companionway on the starboard side. Descending into a lobby one finds a large stateroom opening aft, the full width of the boat with a double berth on one side and a transom on the other and with dresser, wardrobe, and all conveniences. This room opens onto a toilet room, while there is another door opening from this compartment into the lobby.

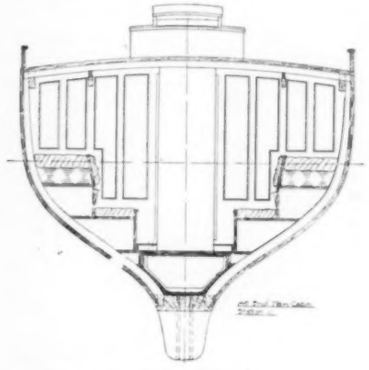
Forward of the lobby is the main saloon with two full length transoms on either side and large hanging lockers. Forward of this is the galley with all the conveniences, while the ice box is athwartships next to the collision bulkhead, giving a refrigerator of ample size.

While designed for speed, it will be seen that the boat has excellent cruising accommodations. The engines are equipped with Leece Neville starters and with the power installed the boat should be one of the fastest on the Atlantic Coast.



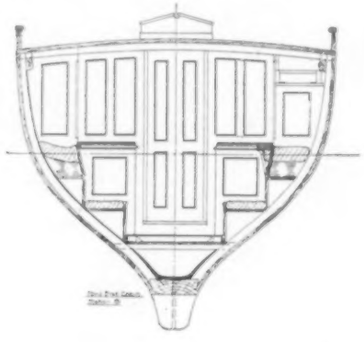
A Flush Deck Auxiliary Cruising Ketch

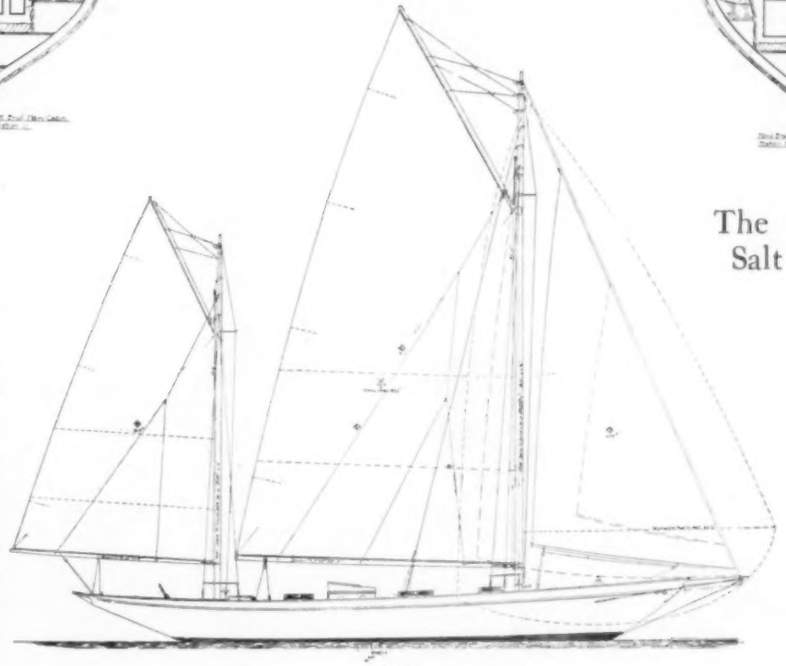
THE accompanying plans are from the office of John G. Alden, Boston, Mass., and show a most interesting 37-ft. water line auxiliary ketch. The designer was not hampered in any way by restrictions, but was asked by Mr. Allen T. Weeks, of New Bedford, for whom the plans were drawn, to design an able, sea-going auxiliary which would have a fair turn of speed, especially to windward, and which could be handled with one paid hand.



In drawing the plans the modern English type was followed, with a moderate draft and beamy, developing a boat which can be driven with an extremely small sail area, in this case 1322 sq. ft. All the sails trim automatically and there are bulwarks 11″ high. The boat has a flush deck with no house and there is 6 ft. of headroom in the cabin. Some 19,000 lbs. of lead is carried outside. The construction is very heavy and the boat should last a lifetime. The principal dimensions are: Length over all 52′ 11″; L. W. L. 36′ 11″; beam 11 ft., and draft 6′ 7″.

The accommodations are most liberal, consisting of an engine room aft with a separate entrance, in which is a 12 h. p. Murray & Tregurtha engine which should give a speed under power alone of 5½ to 6 miles an hour. Forward of this are the owner's quarters consisting of a large double stateroom the full width of the boat; a large toilet and a main cabin with two transoms and two fixed berths. The galley is extremely large for a boat of this size, and there are comfortable accommodations for one paid hand, or two if desired.





The Speed of Boats in Salt and Fresh Water

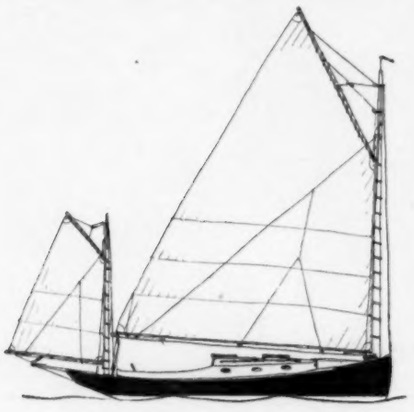
Owing to the greater buoyancy of salt water, the speed of a boat in this medium is generally considered to be greater than that on inland lakes and rivers. This is true to a certain extent, but the difference is usually over-estimated, for it has been found by tests that the respective speeds are as 5.66 is to 5.5, an almost negligible proportion except in exceedingly fast racers.

Sails and Rigs

A Voyage of Instruction for the Man Who Wishes to Know Something About the Sail Plans of Yachts

By CYRUS WILSON

IN 1887 Nathaniel G. Herreshoff designed and built for his personal use a little craft named Clara, 35 feet long, 29 feet waterline and 9 feet 10 inches wide

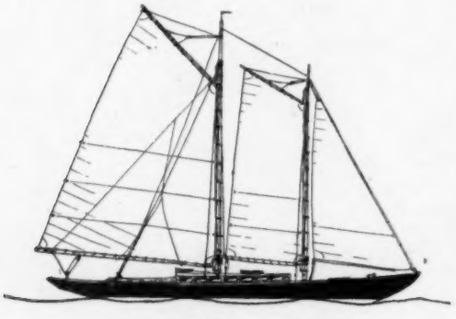


THE RIG OF THE CAT YAWL

with a draft of 5 feet 5 inches. She carried a unique rig consisting of two masts, the

THERE ARE VERY FEW TOPMAST RIGGED YAWLS AFLOAT

main stepped close up to the stem and the after one half way out on the counter; but this was not a yawl or a ketch for a bowsprit and head sails were wanting and for a better name the craft was called a cat yawl. Clara spread two sails, each of odd cut, closely battened to extend a widely roached leach quite similar in plan to the sail of the bat wing rigged canoe. Since Clara's time, although the sails on boats of this kind were changed to the regular gaff-headed type, the rig never became popular. This seems strange because it offers the advantage of being more simple and as easily handled as that of a yawl.

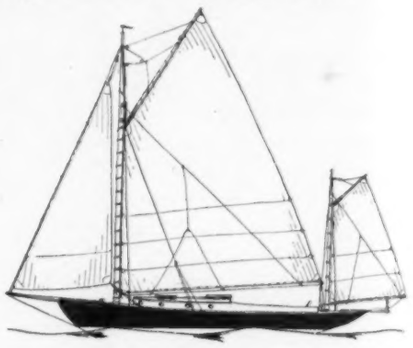


A KNOCKABOUT SCHOONER

The ketch rig is named from an old time Turkish vessel of from 50 to 300 tons displacement formerly and commonly used in the eastern end of the Mediterannean Sea. These craft carried two masts with square sails, the foremost one being the taller and stepped nearly amidships, while the after one was stepped forward of the rudder post and steering gear, this large spread of after canvas was balanced by a number of great fore and aft headsails or jibs similar to those in use today.

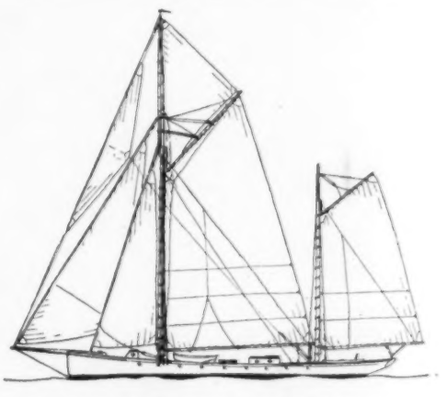
The ketch, practically as rigged today, was, in the earlier days of English yachting, one of the most favored rigs, but present day yachtsmen seem more partial to the yawl and the schooner rig for use on cruising craft. The rig, as we know it today, consists of two masts, each carrying the almost universally adopted gaff-headed sails, the mainmast stepped somewhat forward of amidships, shrouded and stayed in a similar manner to all fore and aft rigged craft, with a shorter and smaller after mast of the same type and rig, called the spanker or mizzen, stepped forward of the stern post and rudder. The headsails are spread from stays, sometimes one, two or three, in identical manner to the headsail plan of a sloop or knockabout. Oftentimes, especially in reaching or running down the wind, a staysail is set from the mizzenmast. The distinguishing feature of the modern ketch rig is the emplacement of the aftermast, which is the shorter of the two spars, forward of the sternpost and rudder. It is a very handy rig, especially for going off shore, as the largest sail is all inboard and the sail plan is well balanced under almost any conditions.

The yawl rig is popular among cruising yachtsmen and so far as general outline is concerned follows closely the rig of the ketch and undoubtedly is a development of it. There are two masts as in the ketch rig, but the forward one, or mainmast, carries by far the greater spread of canvas; this mast being stepped well forward with headsails of the same shape and description as those on sloops and knockabouts. The jigger, sometimes called dandy (after mast), is customarily less than one-half the height of the mainmast and is usually stepped as far aft as the design and construction of the hull permits with an out rigger or boomkin extending aft of sufficient length to give proper control over the jigger sheets.



THE YAWL RIG IS WELL ADAPTED FOR CRUISING CRAFT

There are very few topmast rigged yawls afloat, the tendency being the development of small craft carrying lower sails only; a



THE KETCH RIG OFFERS MANY ADVANTAGES

jib, mainsail and jigger. The yawl rig, especially as spread on the smaller cruising boats, is a particularly handy one; sails may be shortened quickly in any emergency

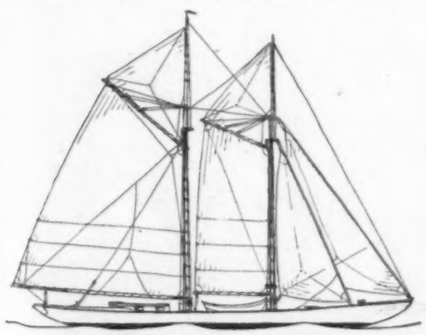
THE TYPE THAT CARRIES COAL, BRICK AND OTHER THINGS

by either dropping the mainsail and proceeding under jib and jigger or lowering the head and after canvas and breezing along by the mainsail alone, thus eliminating the necessity of reefing as would be necessary with a sloop or cat rig. However there isn't the driving power under jigger and jib as there is under the same sail in a ketch.

Captain Andrew Robinson, one time of Gloucester, Mass., has the honor of having been the original creator of the schooner rig, as far as records go. In 1713, he launched the first craft of this description and, from the day when the scattered neighbors of this old time colonial seaport gathered to witness the launching of his two masted fore and aft rigged vessel until today, the schooner, a conception of the new world and purely Yankee in its subsequent development, has sailed the seven seas, a credit to the land of its birth and a revelation to the sailormen of other countries.

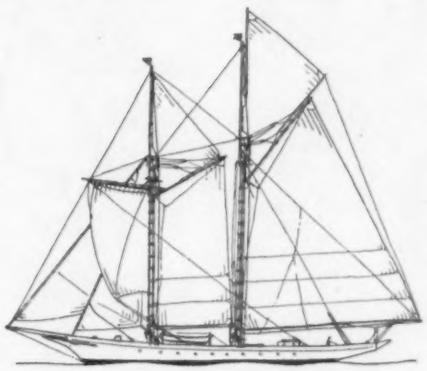
The worth of the schooner rig soon became apparent and year by year its popularity spread and from the original two-masted craft of 1713 grew the larger three-master, then the four-master, and on up the ladder of spars to the Thomas W. Lawson, the largest schooner ever built, a vessel of steel construction spreading sail on seven masts called, in order of their stepping, foremast, mizzenmast, mainmast, spanker-mast, jiggermast, pushermast, and driver-mast. Some sailor men say they should have been named for the seven days of the week. The larger schooners of over five masts were never very successful and are not as good for long deep water voyages and "running down the trades" as the "square riggers."

Excepting only the Chesapeake Bay bugeye schooners that employ leg-o-mutton sails bent upon sharply raking masts, all



A FISHERMAN OUT OF GLOUCESTER

fore and aft rigs, generally speaking, have the same type gaff headed sails and head sails, the same rigging plan and characteristics, differing only in details. The sketches show the four most common types; a knockabout schooner, lacking as its name implies a bow sprit and having lower sails only—jib, foresail and mainsail; a bald-headed schooner, so called because it is without topmasts or foretopmast—usually spreading a jib, foresail, mainsail and main



A SCHOONER YACHT WITH SQUARE SAIL ON THE FOREMAST

gaff topsail; a knockabout-fisherman carrying a full schooner rig—staysail (called jumbo), jib, jib topsail, foresail, fore gaff topsail, mainsail, and main gaff topsail, but without the regular and generally fitted bowsprit; a full rigged schooner yacht, carrying the same sails as the fisherman with the addition of a single yard on the foremast upon which is carried a square sail when desired. There are other variations of the schooner rig, but those given are typical and all of them have similar characteristics. The topsail schooner will be taken up in the next issue with the square sail rigs.

Light sails for schooners, yawls and ketches are of the same character as those used on a racing sloop. The spinnaker is usually carried from the foremast on a schooner and a main topmast staysail is sometimes spread from the main topmast head to the lower foremast head in varying sizes depending upon the course sailed, the direction and strength of the wind.

(To be continued)

The Gunter Rig

In the discussion of the Marconi or Bermuda rig which has lately stirred yachtsmen in this country, and which has been followed in these columns, together with the whole question of rigs for single-handers and coastwise cruising, the good points of the gunter rig, especially for small boats up to 30 feet over all length, or thereabouts, are too often overlooked. For general all-round handiness the gunter rig is hard to beat, either for racing or 'long shore cruising.

In order to bring the many good qualities of the rig to the attention of yacht sailors on this side of the Atlantic we quote from a discussion on sail plans for single handers now going on in England. Mr. T. Harrison Butler, a well-known member of the R. C. C., says of the gunter rig that it would be his final choice for a small boat for all-round use with the jib or foresail, coming to the stemhead and a loose-footed mainsail (with a boom, however) without any battens. For long outside passages the yawl or ketch rig is to be preferred. He gives his reasons as follows:

"The sail of the gunter rig is extremely effective. This has been proved by racing experience. There is no gaff to sag out to leeward, and in consequence the boat will lie a trifle nearer to the wind than with a gaff sail. There is no long head to smash over in a jibe. I find that my gunter jibes easily and sweetly.

"But the chief recommendation of the rig is the extreme facility with which the sail can be handled. Hoisting is simple. You haul up the peak with a single part halyard and belay. Then you have both hands free to hoist the bulk of the sail with the main halyards, which you belay, and finally set with the purchase. Lowering is equally very simple. You cast off the main halyard, and the bunt of the sail falls into the lazy lines, which hang from the double topping lifts, and cannot fall into the water. Then you lower the peak. This process is much easier than with a gaff-sail. If faced with a heavy jibe, all that is necessary is to lower away on the main halyards, jibe and hoist. All this can be done from the cockpit if your halyards lead aft. If you lower the peak of your gaff-sail you may easily carry it away in a jibe, and if you lower the throat you cannot get it up again till you have lowered the peak.

"Reefing is easier with a gunter, for, owing to the cut of the sail the leach comes rapidly in along the boom, within easy reach, as soon as the main halyard is eased off. The sail is tied to the mast by the

AN ENGLISH TYPE GUNTER RIG WITH LOOSE FOOTED MAINSAIL

yard, and there is no head to sway about, as is the case of a gaff-sail. In the case of roller-reefing there is only one halyard to handle, for the peak is self-adjusting. The only valid objection to the gunter is the fact that the boom must be longer than in the case of a gaff-sail, but as we are only concerned with a small area this objection is discounted. For these reasons I strongly recommend the gunter to the single-handed cruiser."

WITH AN OUTBOARD MOTOR YOU HAVE ALL THE ROOM INSIDE THE LITTLE TENDER FOR CARRYING PURPOSES AND A BOAT THAT WILL AT THE SAME TIME TOW EASILY

Your Outboard Motor Equipment

By H. S. Lawrence

IN 1911, the writer was cruising at the eastern end of Long Island Sound, and, wanting to go into a small harbor, we put the "dink" overboard, dropped an outboard motor on the stern and after a few turns of the flywheel started off for the town dock with the pop of the exhaust echoing merrily from the high shore. Arrived at the dock, a bunch of fishermen looked our outfit over with curious eyes.

"Say, young feller, is that one o' them there outboard contraptions, Evinrude, or some sich name as that?"

I nodded, though the brand of engine happened to be different from that mentioned. And, as the crowd gathered, the spokesman went on—

"Say, are they any use?—will they get you there and back, and only weighs eighty pounds? Ye don't sa—ay!"

The curious were now examining the outfit as I hauled the tender up on the float, until we had to disconnect the battery wires for fear of their monkeying. Having finished our errand we launched the boat from the float, connected the battery again and (with some apprehension on our part, be it confessed) threw over the fly wheel before the curious eyes of the crowd. At the second turn she went and the little 10-foot "dink" jumped off like a hydroplane in an international race as it seemed to us, and the last words we heard from the spokesman of the crowd as we left were—

"Well, who'd ha thunk there was so much power in that toy motor."

That was five years ago and things have changed since then, for with the intervening summers men have learned the value of the little bunch of machinery which can be carried around at will and dropped over the stern of any boat, until now it has become almost a standard part of the tender equipment of the smaller sized yachts, or, to be more exact, yachts not large enough to carry boats on davits and to whom the weight of such boats is sufficient to give the yacht a list when it is hoisted.

WHERE THE MOTOR COMES IN HANDY

For general all round use the outboard motor may be aptly called the yachtsman's friend because it makes possible the use of a power tender in small boats and saves many weary miles of rowing in the course of a summer. Power in the yacht tender or "dink" adds greatly to the enjoyment and possibilities of a cruise, as everyone who has cruised with one can testify. The trouble has been that with a small yacht that had to tow its dinghy, a regular power tender was out of the question, as it would be too much of a drag on the boat, with the ever-present danger of filling and sinking in rough water; while for carrying on davits it was equally unsuitable, as the weight was sufficient to list the yacht if swung out and to raise the center of gravity too high if carried on deck or on top of the cabin house. This applies even to yachts as large as 60 or 70 feet in length, a 14-foot power tender being a good deal of a proposition to handle, especially if one is apt to encounter rough water.

With the outboard motor all is changed and this type of power can be used in dinks of from 9 or 10 feet up to 14 or 15 feet. One can thus get the use of all the space in the tender, and hence greater capacity, than with a permanent installation, and when the boat must be towed or hauled up on deck, its an easy matter to slip off a piece of machinery weighing less than 100 pounds and stow it away on deck or below. There is no tank or piping to get out of order, no batteries to protect from the wet and the moisture which is always present in small boats, and this type of power does not affect in any way the towing qualities of the boat.

All this is, of course, apparent to those

EVEN WITH A TENDER CARRIED ON DAVITS AN OUTBOARD MOTOR EQUIPMENT SAVES BOTH IN WEIGHT AND ROOM

who have had experience, or are familiar with the power tender proposition. As a comparison of the two types of power for boats of moderate size it need only be said that a well constructed 10 foot or 11 foot tender will weigh in the neighborhood of 100 pounds and thus can be handled easily on deck with or without davits, or on shore; the outboard motor which can be handled separately, may weigh from 60 to 100 pounds, giving a total weight of something less than 200 pounds for a regular power tender. On the other hand, for a permanent installation the boat would have to be somewhat heavier built, with engine bed, shaft log, permanent tanks, piping, etc., and as it is hardly practical to instal power in a boat of less than 12 feet long, such an outfit would weigh as a minimum in the neighborhood of 500 pounds. There is a big difference in handling the former weight and the latter. If you don't believe it, try it. This is not to say that the power tender does not have its place. It is a very useful part of a boat's equipment, but for very small craft it is not as serviceable as a tender with an outboard motor.

THE OUTBOARD MOTOR MAKES GOOD PORTABLE AUXILIARY POWER FOR THE SMALL SAIL BOATS.

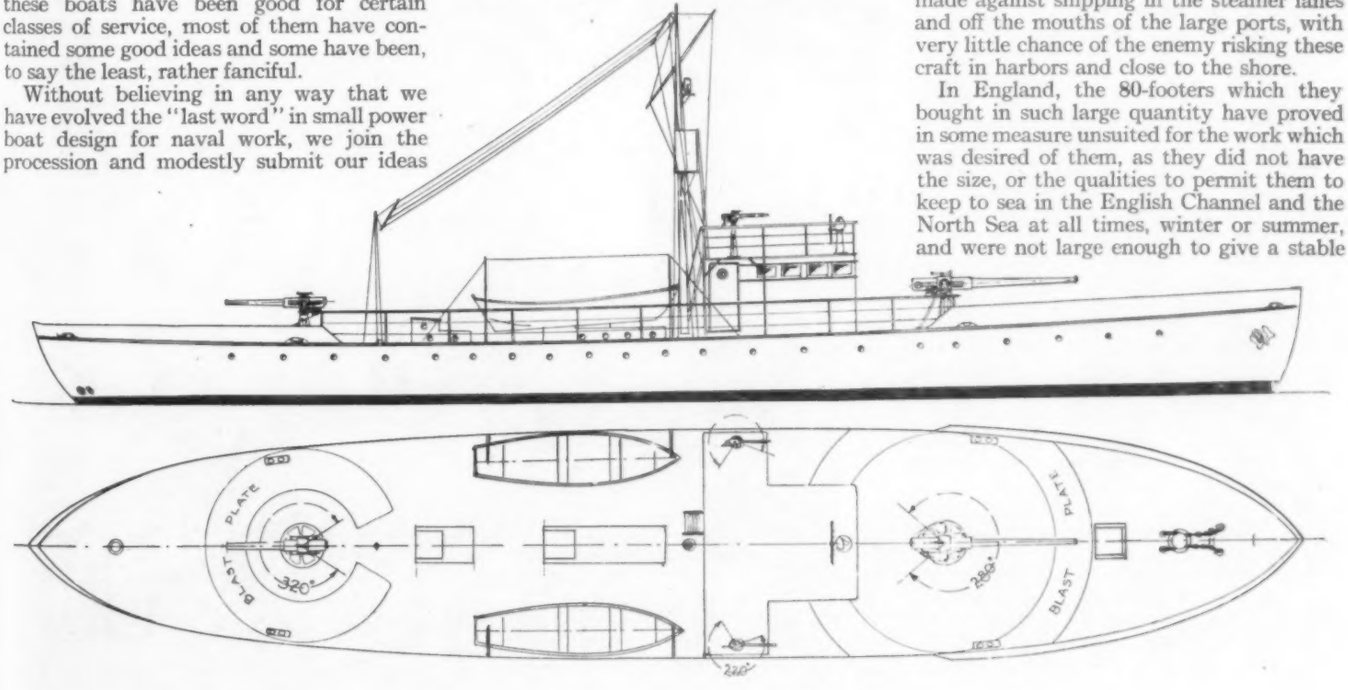
A Proposed 100-Ft. Naval Scout Boat

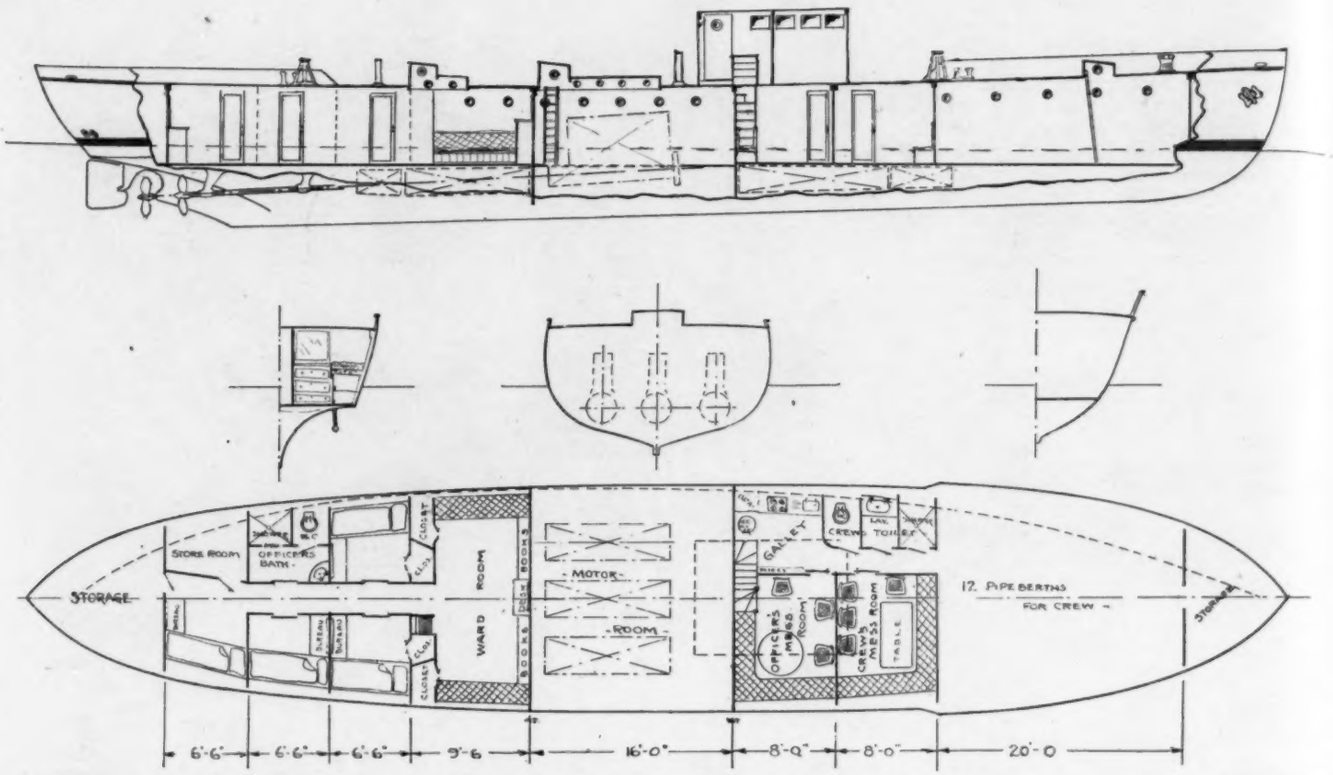
During the past few months, since the international situation has become tense, there have been brought to light and submitted to the Navy Department many plans for naval scout motor boats,—or "submarine swatters,"—to use a picturesque but highly imaginative expression. There have been, apparently, as many ideas on the subject as there were designers. Some of these boats have been good for certain classes of service, most of them have contained some good ideas and some have been, to say the least, rather fanciful.

Without believing in any way that we have evolved the "last word" in small power boat design for naval work, we join the procession and modestly submit our ideas of the type of boat that would be most useful in the present situation, taking in all the factors of the particular conditions which exist along the Eastern coast of this country.

After authorizing two high-speed power patrol boats last year the Government has decided that they are too small (one was 66 feet in length, the other 45 feet) and that boats of at least 100 feet in length are necessary to do effective work on patrol or for the detection of submarines. In this the Department is right, for most of the power boats built so far that have sufficient speed to be of use would be absolutely worthless from fifty to one hundred and fifty miles off shore, if they had to stay on station. And, if a submarine attack should be made on this coast, it would probably be made against shipping in the steamer lanes and off the mouths of the large ports, with very little chance of the enemy risking these craft in harbors and close to the shore.

In England, the 80-footers which they bought in such large quantity have proved in some measure unsuited for the work which was desired of them, as they did not have the size, or the qualities to permit them to keep to sea in the English Channel and the North Sea at all times, winter or summer, and were not large enough to give a stable





gun platform when the weather was at all rough—faults which were due to the government ordering the boats not knowing itself what was wanted. This is an error that we ought to be able to avoid in the light of the last three years abroad, if we will but profit by the example before us. The boats that have borne the burden of this service on the other side, if we can believe what the Admiralty has permitted to get out, are the steam trawlers and the big auxiliary fishing boats with which England was so plentifully supplied before the war. These boats are large enough and able enough to go out and *stay out*, and to do hard, rough work, but are deficient in speed. They have been used for mine laying, mine sweeping, laying and tending of submarine nets, and also for the actual capture of many submarines.

What is wanted, therefore, is a boat big enough to go offshore and stay offshore, with sufficient beam and stability to mount guns of sufficient calibre to be of some use and on a platform stable enough to make the firing reasonably effective. We believe in most of the boats designed, the consideration of speed has been paramount to that of seagoing ability and, when need was seen of the latter quality, the boats were merely *made larger*, maintaining the same characteristics of the out-and-out speed boats.

Most of them have been all on top of the water with very little underbody and practically a flat bottom from amidships aft, with straight sheer and sharp, deep forefoot that would make them hard to steer in a heavy sea. What such a boat would do in a hard sea, whether it was ahead, quartering, or dead aft, can be imagined, and they would have to run for shelter if caught in a moderate gale fifty miles from land.

Taking these facts into consideration we have turned out a boat with good underbody, easy sections though with a fairly hard bilge to give initial stability, sufficient underbody to allow her to hold on and get some grip on the water, fairly full forward sections to give buoyancy, and an easy sheer. The boat looks in profile something like the steam pilot boats of New York though with finer lines and easier driving qualities. Taking the minimum length desired by the government we have made the boat 100 ft. length over all, 18 feet extreme beam, 17 feet 6 inches beam at the waterline, and 6 feet 6 inches draft. There is a rounded cruiser stern with the chine logs carried forward about 18 feet so that the buttock lines may be carried out fair, giving her straight stream lines and making her easier to drive, while the rudder is of the regulation type used on modern cruisers and naval ships. The lines being fair and easy the boat ought to be capable of sufficiently high speed, which we would say would be from 20 to 22 miles at a maximum, as this would be several knots faster than the announced surface speed of the fastest submarine.

The power is amidships and consists of three 350 H. P. heavy to medium duty gasolene motors. There are a number of motors on the market today that would answer these needs to get the speed required. This is about the same power installation that was placed in W. K. Vanderbilt, Jr.'s successful Tarantula, although that boat only had two motors instead of three.

While the figures for radius of action and gasolene consumption depend largely on the make of engine used, the following table gives the approximate speed, consumption and radius with the power mentioned:

Miles	H. P.	Galls. per hr.	No. Hrs.	Radius
20	1000	125	32	640
19	800	100	40	760
18	600	75	53	954
17	400	50	80	1360
13	200	25	160	2080

The gasolene tanks are well below the water line, under the cabin floor and have a total capacity of 4,000 gallons. This location of the tanks not only gives a lower center of gravity but they are better protected from gunfire than they would be above the water line. The deck is protected forward and aft by a raised bulwark with considerable flare to it, and the forward gun is an 18-pounder (about 4-inch calibre), which, on the other side of the water has been found none too large to cope with the modern submarine, which now carry guns of this size and are protected by light armor plate. The after gun is a 12-pounder (about 3-inch calibre) both being drawn to scale in the plans.

Amidships is a steel wheel and navigating house with an auxiliary steering standard on the bridge above it, and here are mounted also two small rapid firing guns, one on each wing of the bridge. This is followed by a mast carrying one end of the radio antennæ, the other being held by a staff aft. Upon the mast is mounted a crow's nest for the lookout.

In laying out the quarters particular

(*Continued on page 245*)

THE lines of the New Silent Valve-Driggs Marine Engine *express* strength.

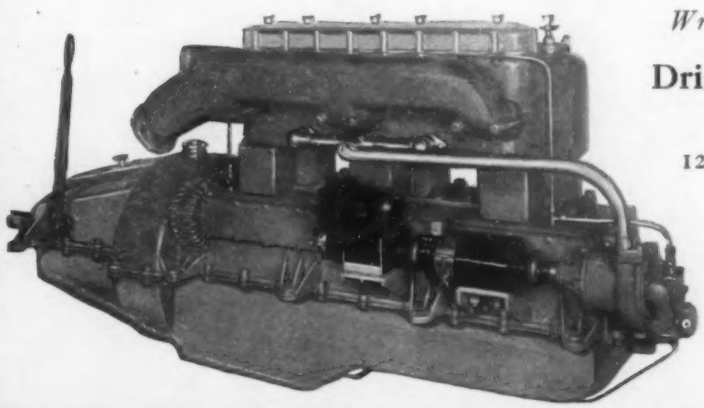
The Chrome Vanadium steel, the toughest and strongest material available for our connecting rods and crank shaft, *insures* strength.

The Silent Valve-Driggs Engine is compact. All moving parts are enclosed, yet readily accessible.

Strong in construction, the Silent Valve-Driggs Engine is powerful in action.

The unusually large ports, permitting full intake, and complete elimination of burned gas, make for power, also economy of fuel.

Silence, Speed and Strength are the Driggs fundamentals.



Write for illustrated catalogue

Driggs Ordnance Co.

Dept. C

120 Broadway, New York

SILENT VALVE DRIGGS

SQUAD SHOOTING AT NEW ROCHELLE IN THE FIRST INTER YACHT CLUB TRAP SHOOTING TOURNAMENT.

New Rochelle Y. C. Wins the Inter-Yacht Club Trapshooting Tournament

As proof of the fact that yachtsmen are not afraid of the water under any conditions, some forty-five members of the yacht clubs in the vicinity of New York faced the traps on Saturday, March 17th, in a driving rain storm accompanied by a cold, east wind which at times attained the velocity of a gale. The occasion was the third and deciding shoot of the Inter-Yacht Club Trapshooting Tournament for the YACHTING Trophy, and the open shoot of the Port Washington Yacht Club, on whose grounds the event was held, the shooters representing six or more yacht clubs.

At the end of the second team match last month, the New Rochelle Yacht Club led by a margin of 44 points, with Port Washington second only five birds ahead of the Indian Harbor Yacht Club, with the Orienta Yacht Club fourth, and the Marine and Field Club fifth. As this last shoot was the deciding event, a good sized squad from each of the leading clubs was on hand. Conditions, however, were against the high scores which had been made in the first two matches and were, indeed, so bad that the best shooters were 'way below their averages; they were particularly hard upon those wearing glasses or goggles as the rain blurred them so that it was impossible to see clearly, while the shooting over No. 2 trap was very difficult as the wind was blowing directly towards it into the faces of the shooters.

A. L. Burns and Tracy Lewis were the two exceptions, the former coming through with a score of 91 and the latter with 88. The fight was very close between the New Rochelle and Port Washington Clubs and, when the final squad had finished and the scores of the five high guns for each team were added together, it was seen that the Port Washington had beaten the New Rochelle by 416 birds to 401, a margin of 15 points. This was not enough, however, to overcome the lead of the former club on the match, and New Rochelle thus won the trophy with a margin of only 24 birds. This is very close shooting when two teams get within 24 birds out of a total of 1,500 shots for each team.

The Indian Harbor Yacht Club squad did not show up, probably on account of the weather conditions, and the Orienta Yacht Club thus finished in third place, which (by the law of averages) the Indian Harbor Yacht Club would have had, had their team been on hand. The final score of the Port Washington Yacht Club was excellent considering the conditions of the third shoot.

A. L. Burns gets the high score trophy with a record of 281 out of 300, his scores being for the three shoots 98, 92 and 91. F. W. Howard made 94 the first day, 89 the second, but only 67 in the hard conditions of the third shoot. Second high man is D. S. Cornwell, 267.

The scores of the teams for the final day follow and also the total scores for the match.

PORT WASHINGTON YACHT CLUB	
Tracey Lewis	88
H. H. Shannon	86
D. S. Cornwell	85
D. E. Smith	79
C. L. Thompson	78
	416
NEW ROCHELLE YACHT CLUB	
A. L. Burns	91
G. P. Granbery	80
J. P. Donovan	80
J. N. McLoughlin	77
A. P. Bennett	73
	401
ORIENTA YACHT CLUB	
J. Lawrence	68
R. C. Simpson	60
J. Bister	58
(Only three shooting.)	186

Several of the clubs that had entered did not send teams, principally on account of the fact that their trap team had not gotten together this year, due to the high cost of targets and shells. The event was a great success and has done much to keep up interest throughout the off season.

In the Port Washington Yacht Club open tournament the first handicap prize went to H. H. Shannon, of the Port Washington Yacht Club, with a score of 86, plus 14, making 100; and second prize to B. D. Cheshire, Oyster Bay Club, with 73 and 30, 100; J. Lawrence, Orienta, 98, third.

THERE WAS "SOME RAIN" AT THE PORT WASHINGTON YACHT CLUB FOR THE LAST SHOOT, YET 500 MEN FACED THE TRAPS.

"She's Going Strong"

The 1917 boating season is booming right along. If you have postponed buying

Marine Supplies

until now then—*you need us—we have the goods.*

Send 20c in stamps for our Catalog No. 102 showing Marine Hardware, Motor Boat Fittings, Yacht Sails, Flags, Awnings, etc. (We refund price on your first order.)

GEO·B·CARPENTER & CO.

440 Wells Street Chicago, U. S. A.

Consult YACHTING'S Information Department on any of your problems. Its service is absolutely free.

OF INTEREST TO THE SKIPPER

Looking Inside of the Modern Marine Engine

Two photographs have come to us from the Sterling Engine Company, Buffalo, which show this company's six-cylinder Model F engine opened up so that its design and construction can be seen, providing an excellent opportunity to view the internal mechanism of the marine engine of today. These motors are built in 8, 6, and 4-cylinder units and are familiarly known as the Navy type because of their extensive use in volunteer patrol cruisers, many of which, by the way, have recently been called out for active service. A contract for 16 of the 6-cylinder Model F motors for the United States Government is now going through the Sterling shops and they will be used in admiral's barges and battleship tenders.

In commenting on the design of the Sterling Model F motor the predominant feature is the counter-balanced crankshaft. By counter-balancing the crank and preserving a perfect running balance, the oil film remains unbroken, thus overcoming bearing friction and vibration, and there is a natural increase in horsepower.

The upper base is one piece high vertical section (patents allowed) which gives considerable strength. Much rigidity is obtained, due to there being no two parallel sides or faces. Arch web construction is used for holding the journal caps, making bending or distortion of either base or crankshaft practically impossible even under heavy load.

Cylinder construction is such that a flange is carried up near center of the cylinder while a portion of the cylinder is skirted into the base. This gives to the cylinder a superior fastening, for the thrust is taken more directly against the bolts instead of against cylinder flange, which prevents the wearing and weaving of the cylinder while the engine is running.

An electric starting and lighting system is furnished with regular equipment. These instruments are built-in as a part of the engine and the driving mechanism is entirely enclosed. The oiling system is the pressure feed type through the crankshaft and considered by many to be the most efficient system of lubrication in use today.

Uncle Sam Uses The Gray

Uncle Sam is a discriminating buyer and when he chooses to put his O. K. upon anything, whether it be a marine motor or a steel bridge, one may be pretty sure that it is just as it should be. That he has endorsed the Gray Marine Motor, both the Model "D" and the Model "F," is evident from the fact that he has recently purchased for the United States Coast Guard Service eight 4-cyl. 4-cycle Model "D" 20-24 H. P. Motors and three of the 12-15 H. P. Model "F" machines, as a preliminary order. These motors are being placed in the tenders of the Coast Guard Cutters and also in power life boats. One has been placed in a boat belonging to the Cutter Seneca now stationed at Tompkinsville, Staten Island, N. Y., and this boat may be seen in the accompanying photograph. Another has been placed in a boat belonging to the Itasca, which is now stationed at San Juan, Porto Rico, while a third has been sent to the Coast Guard Training Station at New London.

A GRAY POWER COAST GUARD CUTTER

The importance of having a motor which is absolutely reliable and possesses strength and endurance is obvious when it is remembered that these boats are placed under conditions of the very severest character, where a motor breakdown would mean disaster and the loss of many lives. It is a testimony to the high standard of Gray motors that the Model "D" and Model "F" should be the ones accepted by the United States Government for this all important service.

Another thing that will interest motor boat "bugs," is the New Gray Marine Catalog. This is a very handsome and complete book showing all the Gray Models, both two and four-cycle. Starting in with Gray construction methods, it takes up each model separately and gives all the information about that engine, together, so that one does not have to hunt all through the book for details of one motor he may be interested in. The Gray 4-cycle models are fully described and these engines, the 12-15 H. P. 4-cylinder, the 10-12 H. P. 2-cylinder and the 20-24 H. P. 4-cylinder are fine pieces of workmanship, fit for the highest type of service and with lots of "punch" in them. In the back of the book is a reproduction of a Gray curve sheet showing the brake horsepower pulled by the various models at varying revolutions—accurate information which every purchaser wants to know. The catalog is beautifully printed and everyone in the market for an engine this year should send to the Gray Motor Co., 458 Oakland Ave., Detroit, Mich., for one.

Brush Up On Your Navigation

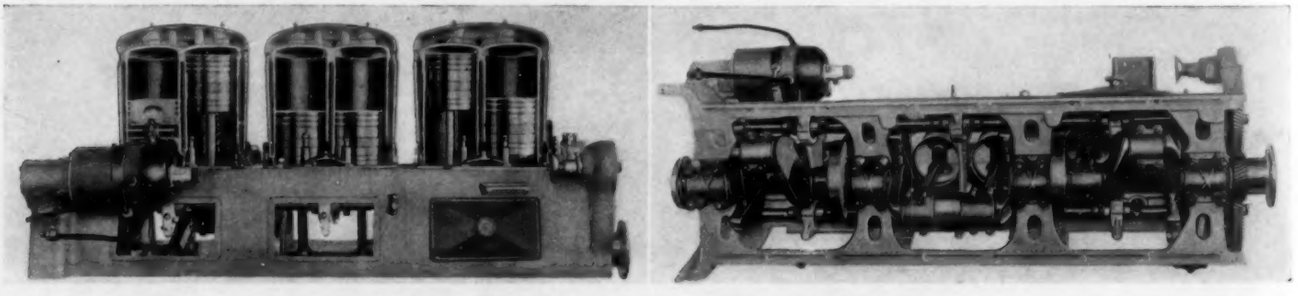
At this critical period in our history when the Government is taking unusual steps to get men for manning the big naval auxiliary fleet and are looking to the yachtsmen and boat owners to enroll, every man who can be useful should offer his services.

This means that in order to qualify you should brush up on your navigation, both pilot water and nautical astronomy. Lots of men know the rules of the road and are fully competent to navigate a boat, but are rusty on some of the rules.

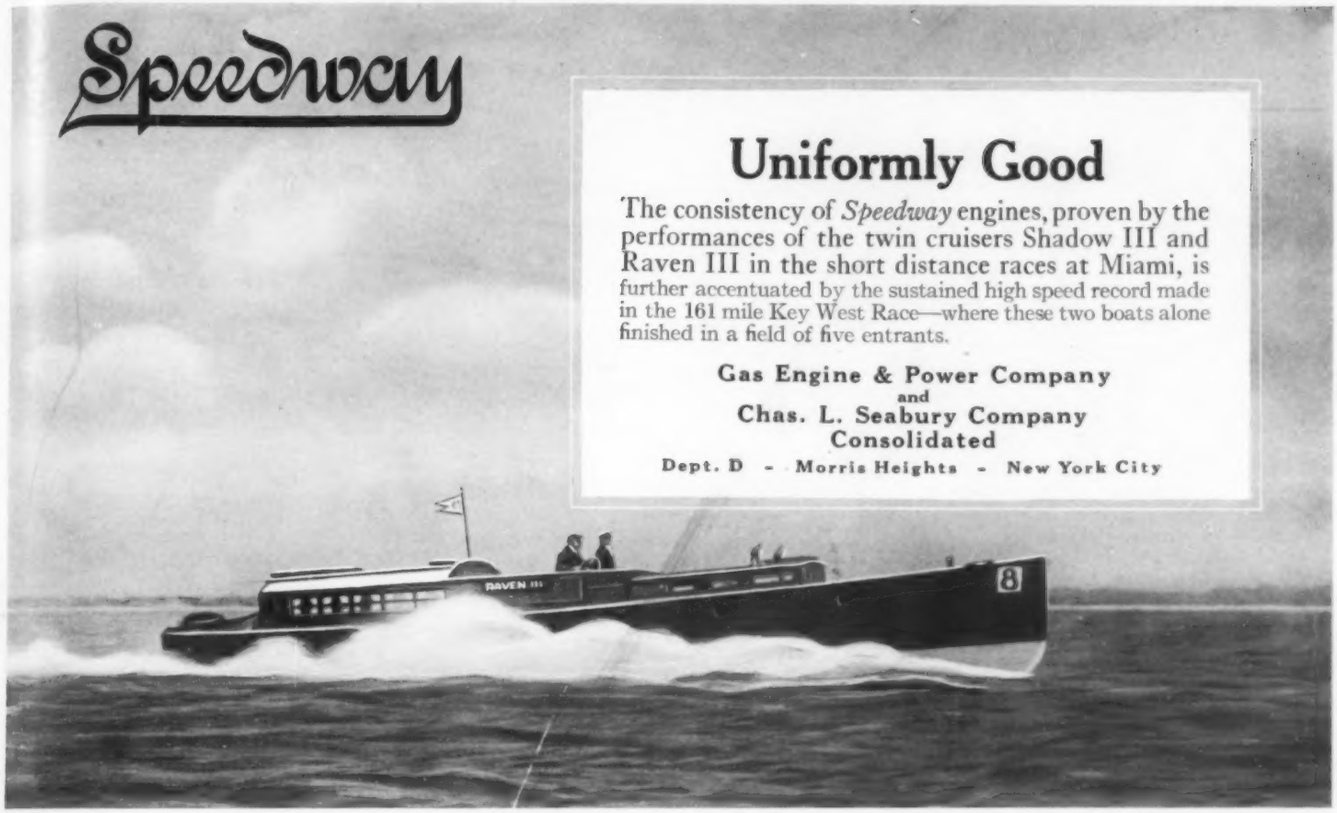
A very useful set of handbooks or guides to navigation is published by Pugsley's Nautical Press, of 17 South Street, New York, which yachtsmen would do well to read. These comprise the following:

Pugsley's Guide to the U. S. Local Inspectors' Examination of Masters and Mates of Ocean going steam and sailing ships.
Pugsley's New York Pilot.
Pugsley's Tides.
Pugsley's Dead Reckoning.
Pugsley's Latitude By Meridian Altitude (Sun and Stars).
Pugsley's Multiplication Table.
Pugsley's Log Book.
Pugsley's Learner's Compass Card.
Pugsley's Seaman's Receipt Book.

Pugsley's Guides are gotten up solely with the idea of helping men to pass the examinations of the Steamboat Inspection Service and for that reason the information is in very handy and concise form; and, while our readers may not all be going up for these examinations, they will find the books very valuable for brushing up their navigation. They may be had from the publisher direct or from YACHTING, 141-145 West 36th St., N. Y.



TWO INTERESTING INTERNAL VIEWS OF A NAVY TYPE STERLING MOTOR



Uniformly Good

The consistency of *Speedway* engines, proven by the performances of the twin cruisers Shadow III and Raven III in the short distance races at Miami, is further accentuated by the sustained high speed record made in the 161 mile Key West Race—where these two boats alone finished in a field of five entrants.

Gas Engine & Power Company
and
Chas. L. Seabury Company
Consolidated
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Yacht Insurance

WE MAKE A SPECIALTY OF ALL MARINE LINES; INCLUDING YACHTS AND POWER BOATS

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Turbine Type Propellers

Are Absolutely Unequalled for Efficiency when used on Hydroplanes, Runabouts, Cruisers or Working Boats. Get a HYDE and learn the meaning of

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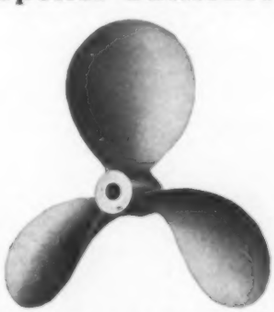

Interesting Catalog showing HYDE equipped craft of every description mailed free upon request

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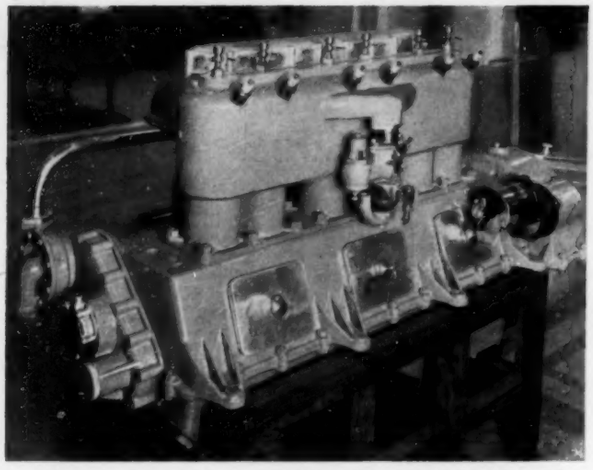
BATH, MAINE, U. S. A.



A SIX-CYLINDER SILENT-VALVE DRIGGS MOTOR SHOWING SIMPLICITY OF DESIGN AND COMPLETE ENCLOSURE OF ALL MOVING PARTS

Duesenberg Engines in Many Boats

The Duesenberg models which caused so much interest at the Show are going into many of the new high speed boats that are being built this year. We are reliably informed that this company has just closed a contract with a foreign government for forty-two 8-cylinder 6¾ inches x 7¾ inches 275 to 400 H. P. Patrol model engines which they received after a thorough test of the engines. They had previously supplied this government with a small number of machines, each one passing through a severe test consisting of a five-hour run at maximum power followed by one hour at a speed of from 800 to 1,500 revolutions. This was followed by a severe backing test, all the engines coming through with a perfect score.

As these 8-cylinder engines sell at $6,250, it would seem that this contract in dollars and cents is the largest single order ever placed for high speed marine engines.

The New York Yacht Launch & Engine Works are also building a 55-foot scout boat from designs by Tams, Lemoine & Crane with one 6-cylinder 200-300 H. P. Duesenberg.

The Greenport Basin & Construction Co. have sold Chingachgook, their scout boat, to the U. S. Government and have laid down the keel for a new boat of this type but with more speed for next summer, which will be powered with two 6-cylinder Duesenberg Patrol motors. The same company is also building a 72-foot scout boat for Mr. Oliver G. Jennings which will be powered with three 8-cylinder Duesenbergs. These engines have given great satisfaction wherever they have been used.

The Value of Marine Glue

At this fitting-out time of the year yachtsmen are interested in overhauling their boats and particularly in getting the decks, cabin houses, etc., tight. Yacht glue has always been looked upon as one of the best articles for paying the seams of yachts, motor boats and the like, or for filling checks in spars and a new glue that has recently been placed on the market by the W. A. Briggs Bitumen Co., of 3303 Richmond Street, Philadelphia, Pa., has many qualities to recommend it. It is very flexible and extremely durable, being insoluble and yet adhering to the sides of the wood under all conditions of service.

Mr. Briggs, the head of the company, has had sixteen years experience in the manufacture of marine glue and he was for the same number of years technical director of W. Briggs & Son, Ltd., of Dundee, London, Hamburg and New York. In this capacity he invented various grades of marine glue, of which hundreds of tons were supplied to England, Germany and the United States, as well as to a great number of private firms.

This was used most successfully on vessels trading in the tropics—always a severe test on marine glue—as well as on those sailing in temperate climes.

This yacht glue is of a high grade and can be relied upon to stand the severest conditions of wear and tear in any climate. At the same time the price is moderate and it will pay any yachtsman repairing his yacht or who has been troubled with leaky decks to write the W. A. Briggs Bitumen Co. for information and prices.

The New Valspar Plant

Yachtsmen who use Valspar on their yachts will be interested in knowing that the wonderful demand for this varnish has necessitated the erection of a special plant for this one particular product of Valentine & Co.

THE BUILDING WITHIN WHICH VALSPAR IS MADE

When Valspar was born into the world, it got its snappy nautical name because it was meant to be the perfect boat varnish. The long series of laboratory experiments which preceded its production aimed at the discovery of a varnish which every boat maker and owner demanded—*a varnish that can't turn white.*

As soon as the boat men began to find that Valspar actually stood up to its job, and that it didn't have to be renewed frequently, their call for it was immediate. Season by season its demonstrated superiority increased the demand, until now, after eight years, it is established as the standard marine varnish and its sale exceeds any other.

But the same waterproof qualities which made it the 100% efficient varnish for boats soon made it the superlative varnish for all natural woodwork and furniture. The familiar pictures of water-drenched floors and boiling-waterproof tables spread everywhere the fact of Valspar's imperviousness to leaks and rains and spills. So the demand for Valspar ashore became even more extensive than the demand for it afloat.

Valspar had begun as a specialty product of the Valentine Company; it was the youngest of the then big family of varnishes and enamels. But each year Valspar took a bigger space in the factory until the baby was uncomfortably crowding its older brothers. In order to give it adequate room, and with a business-like vision of its future growth, a new plant has been built for its *exclusive* accommodation.

The other day we were taken through this new factory in Williamsburg, New York. It is certainly a show plant and it provides for the entire business of Valspar packing, handling and shipping—in itself so big a work as to require this special building. Practical skill has been exploited in advanced devices for efficiency, for labor-saving and time-saving. The experimental laboratory is bewildering in its scientific elaborateness and completeness. The show room contains many impressive models, demonstrating effectively and simply how Valspar resists water and weather.

The extent of the present demand for Valspar is suggested at the Valentine plant when one passes among the long rows of giant tanks—in batteries—containing from 2,500 to 25,000 gallons each, ready to go out on their mission of defending wood against the water enemy, and of making human belongings more beautiful and serviceable.

The Silent-Valve Driggs Motor

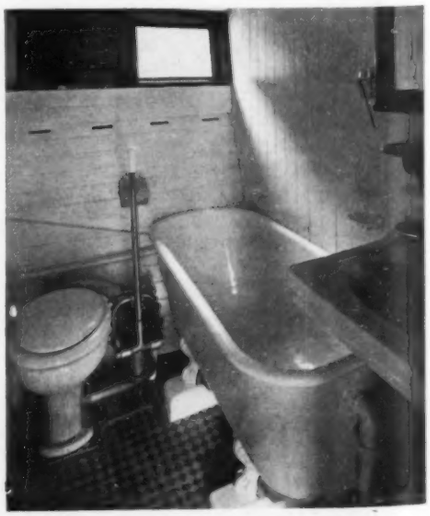
Makers of automobile motors at present are announcing sixteen-valve, four-cylinder motors, for which they claim increased efficiency. Sixteen valves for a four-cylinder motor are employed to obtain larger port openings. To accomplish this they use two inlet and two exhaust valves for each cylinder. Silent-valve construction obtains the same result with only one valve for each pair of cylinders, and so gains in simplicity.

A 4-cylinder Driggs engine instead of having sixteen clattering poppet valves secures the same result with but two rotary silent valves—and this with unrestricted gas passages almost free from turns means nearly perfect inlet and exhaust functioning.

The valve shaft is driven through gearing from the time shaft, and the valves are of conical form and have an ingenious device that allows them to lift from their seats within which they revolve, which relieves any friction caused by distortion of the seat or valves through overheating. This lift is just enough to secure the normal clearance between the valve and its seat, between which there is an infinitesimal film of oil. The adjusting mechanism controls this accurately, so that the oil film is maintained at a constant thickness—and a valve is obtained that is efficient, silent, simple, adjustable and gas-tight at all times.

Toilet Room Fittings

Just because one goes to sea is no reason why he shouldn't have as convenient and attractive toilet room fittings and as satisfactory plumbing as he would in his own home. In modern yachts that have been turned out the designers have paid particular attention to the plumbing and fittings and it's your own fault if you don't get a satisfactory outfit.



A CURTISS EQUIPPED TOILET ROOM ON A 65-FOOTER

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THEODORE D. WELLS

TEBO YACHT BASIN COMPANY

Foot 23rd Street, BROOKLYN, N. Y.

APRIL **Announcement** 1917

The property known as the Tebo Yacht Basin, acquired by the Todd Shipyards Corporation in August, 1916, has been extended by purchase of adjacent property to the southwest. Table below will be of interest to our patrons and other yachting men.

TABLE

Character	Original Basin	Recently Added	Basin Extended	Increase
Upland	79321 sq. ft.	210200 sq. ft.	289521 sq. ft.	265%
Water	474837 " "	99942 " "	572779 " "	21%
Total	552158 " "	310142 " "	862300 " "	56%

In this basin, the largest, most accessible, best protected and patronized basin in the world, yachtsmen can secure storage, dry docking, repairing and supply facilities more satisfactorily in the future than in the past.

WE DESIRE TO SERVE YOU

Real Boat Upholstery

—as handsome as the finest kind of leather, yet strong, serviceable, stanch, water, dirt, and grease proof, 100% efficient for cushions, hangings or interior cabin decorations that's

DU PONT FABRIKOID

Its leatherlike surface is the last word in luxury yet it wears like a good friend. Mildew, mould, salt or fresh water stains cannot affect it and may be easily wiped from its surface with a damp cloth. It always looks neat.

Rayntite for Tops

of speed or motor boats settles the top problems for ever and all. It is light, strong and thoroughly waterproof.

Write for samples and full information
It's well worth while if you own a boat.

Du Pont Fabrikoid Company
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Works at Newburgh, N. Y.
and Fairfield, Conn.

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EIGHT-DAY HIGH-GRADE

SHIP'S BELL CLOCKS

And Non-Striking Clocks—Practically Waterproof Cases, for use on YACHTS, STEAMSHIPS, MOTOR BOATS, HOUSEBOATS, Etc., and

AEROPLANES and SEAPLANES

Also our (patented) AUTOMATIC SHIP'S BELL CLOCK. The Clock in pilot house, cabin, etc., operates large bell forward Circulars on application—latest-up-to-date accessory.

And, Clocks for Finest RESIDENCES, CLUBS and AUTOMOBILES

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On Sale by Highest Class Jewelers and Dealers in Nautical Instruments

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One of the most attractive exhibits at the recent New York Motor Boat Show was that of the J. H. Curtiss Company, marine plumbers, who had a particularly fine line of toilet room fittings, which will be found in many of the finest yachts on the coast. These included wash basins, both folding and stationary, of all sizes and types, bath tubs, showers, toilets, and the like.

The picture we show herewith proves what can be done in the way of a bath room in a boat of very moderate size, the craft being the Harmar, a 65-footer.

Gielow & Orr, Yacht Brokers, Increase Staff

Oliver B. Capelle, a member for the last four years of the Power Boating staff, in Cleveland, has joined the yacht brokerage department of Gielow & Orr, naval architects and brokers, at 52 Broadway, New York City.

Gielow & Orr is one of the oldest and best established firms engaged in yacht brokerage. There are upwards of five thousand yachts on the firm's list of boats for sale, charter and exchange, so that regardless of the type, size, cost, equipment, or class of service a client has in mind, Gielow & Orr is in a position to take care of it.

The growth of this firm's dealings in yacht brokerage is so marked that additions to its staff have become peremptory, and the acquisition of Mr. Capelle is but one of several that are expected this Spring.

Be Careful of Your Decks

You can scrape your desks down to the wood, sandpaper them to a glass finish, and then rub down between each coat of varnish that you put on and flatter yourself that you made a good job of it. And then, the first thing you know, along comes a hot, dry spell, the strips of the deck shrink, and the composition of putty, wood filler, and various other things that are so often used to fill in places between the strips, cracks and loosens. Then the next time the deck gets wet, the strips swell and squeeze out the loosened putty, and all your toil has been for naught so far as the appearance of the deck is concerned.

There is a composition that will stay in the deck seams for an entire season, no matter to what degree of alternate wetness and dryness, cold and heat, the decks are subjected. This is Jeffery's Patent Marine Yacht Glue, and the secret of the longevity of its usefulness lies in its elasticity, which allows it to be compressed or expanded without leaving the sides of the seam in which it is placed.

The glue is made in black, white, yellow and also a mahogany color. White, yellow and mahogany look pretty but the black is the best and is guaranteed by the makers to be the really genuine original sticker that relieves the owner's mind of all care as far as his seams are concerned. It is a mighty good idea for the boat owner when getting his boat in commission for next year, to specify that Jeffery's Marine Yacht Glue be used to pay the deck seams, or if he intends doing it himself, to write to L. W. Ferdinand & Co., 152 Kneeland St., Boston, Mass., for a sample of the glue and directions for applying same. These directions are a mighty important item, as while very simple and easily followed, they must be followed if the best results are to be obtained.

An Electric Outboard Motor

The electric motor boat has always met with favor on account of its noiseless working and cleanliness; in view of the success of the outboard motor it is not surprising that an electric outboard has been perfected and recently been placed on the market. The high cost of gasolene has created a very large demand for the electric outboard motor in place of the gasolene motor in foreign countries.

The electric outboard motor which we illustrate is manufactured by the Jewel Electric Co., 112 North Fifth Avenue, Chicago, Ill. The machine is of particular use in cases where simplicity of operation is desired, while for ducking or trolling a boat fitted with one of these little motors would be ideal. As regards general lay-out, the machine closely resembles the conventional type of petrol-driven outboard motor, being clamped to the boat in the usual manner.

The motor is placed directly above the main driving shaft, which is contained in a telescopic tube, allowing the propeller to be adjusted to the correct distance beneath the surface of the water.

THE JEWEL ELECTRIC OUTBOARD MOTOR WEIGHS ONLY 50 LBS. WITHOUT BATTERY

The propeller is driven through a modified type of worm gearings which gives a great reduction between the motor and propeller, this being necessary owing to the fact that the normal speed of the motor is about 3,000 r. p. m. Above the motor is a small steering wheel, which enables the propeller to be turned to the right or left hand, or completely round if it is desired to reverse. To this wheel may be fitted either a tiller or steering yoke, according to requirements. The outfit is made of aluminum and manganese alloy wherever possible to reduce the weight.

It is worthy of note that the motor complete, but without battery, weighs only 50 pounds. Regarding details of the motor, the armature runs on ball bearings, and the commutator and bushes are of special design suitable for low voltages, as the motor is used with a current of from 6 to 12 volts.

Keeping Your Sails Clean

Ask any yachtsman what causes him the greatest annoyance during the yachting season and it's ten to one that he will tell you the mildewing and soiling of his sails, for which, up to the present, there has seemed no adequate remedy. We have all tried soaking sails in salt water when they were new, treating them with various chemical processes, which usually made them deteriorate very fast, and done other things that we have heard of from time to time, but without success.

It seems now, however, as if the bugaboo had been chased by a new electrolytic process of treating the canvas which makes it absolutely mildew-proof. This is done by treating the canvas by an electro chemical process before it is made up into the sail, thus making it absolutely impervious to water, with no chance of absorption. Moisture has then no effect on the cloth and mildewing or rotting is absolutely prevented.

We have seen and tested cloth which has been treated in this way and it seems to be all the makers claim for it. Some suits of sails for yachts have already been made after the canvas has undergone this treatment, with entirely satisfactory results.

The canvas being treated by an electric process leaves the sail soft and pliable and as the pores of the canvas are not filled up it does not add to its weight, or make it stiff, the treatment being applied to the fibres of the fabric. A sail treated in this way repels water instead of absorbing it and is thus never sopping wet, so that it can be furled when wet without any injury to the cloth or danger of mildewing. In fact, we saw a canvas tent treated by this process which had lain collapsed under melting snow for over three weeks and when removed the fabric was just as dry and soft as ever.

The cost of this treatment is not expensive and in having new sails made this year, if you want them to last and to always look well, insist on your sail-maker having the canvas treated by the Tatelec-Electrolytic treatment before it is made up into the sail.

Further particulars may be obtained by addressing the Tate Electro Water Proofing Company, 318 West 39th Street, New York, N. Y., at which address the company treats the canvas.

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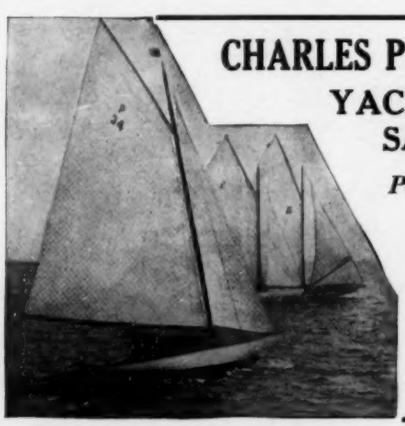

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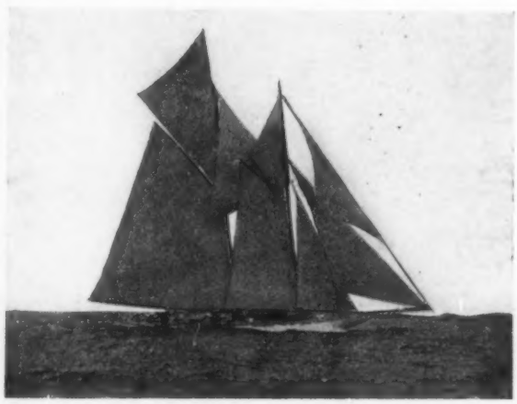

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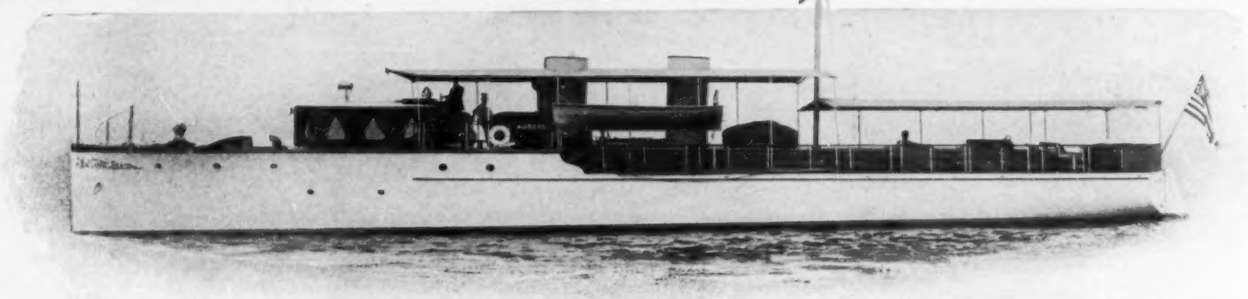

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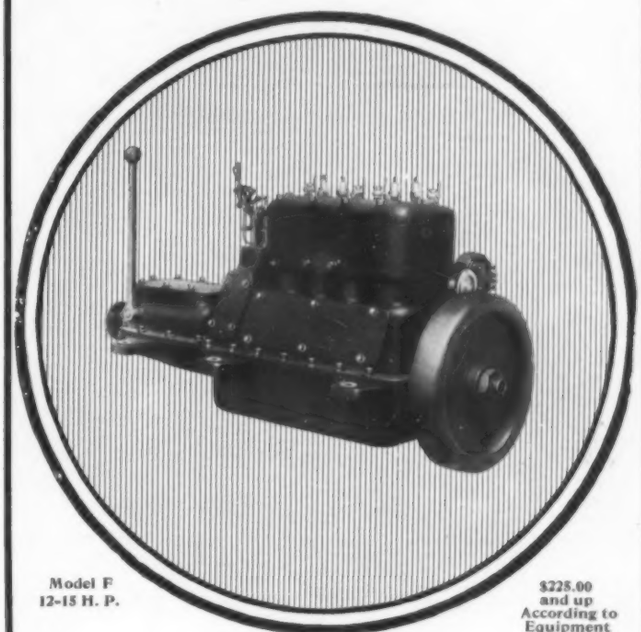

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THE dressing table adorned with articles de toilette of Ivory Py-ra-lin charms the soul attuned to beauty and inspires mistress and maid to artistic achievements. ¶ What mellow richness of tone is here—what exquisite graining of finest ivory—converted by skillful craft into beautiful things to delight milady's most dainty fancy. ¶ And what a wealth of variety! The better shops show a wondrous assortment. Our Ivory Py-ra-lin brochure illustrates some exclusive pieces and designs not usually obtainable.

The Arlington Company
725 Broadway, New York

DU PONT

SHIPMATE RANGES

10 Sizes *14 Numbers*

"There's no good in an East wind!" So sailors say, but all winds waft the appetizing odors of meals cooked on a SHIPMATE. North, South, East and West, a man only needs his nose for a compass in leading him to the craft where there's a SHIPMATE in the galley. The Sailorman's range. Always reliable—fair weather or foul.

Made by
The Stamford Foundry Company
Established 1830 STAMFORD, CONN.

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Brass Side Pulley
Brass Fair Leader on Plate
Wrought Brass Lag Screw
Brass Curtain Toggle
Brass Curtain or Grommet Hook
W. & J. TIEBOUT
MARINE HARDWARE
Air Whistle
Wrought Brass Hanger Bolt
Brass Wire Rope Clip
Brass Stanchion
A postal will bring our new big catalogue "17A" showing a complete assortment of motor boat and yacht equipment and supplies.
118 CHAMBERS STREET, NEW YORK

MAVARICK, Class A, Inland Lakes Yachting Association

WHETHER YOU WANT RACING OR CRUISING SAILS, WHETHER YOU SAIL ON SALT WATER OR ON THE GREAT LAKES OR INLAND WATERS, YOU WANT THE FINEST PRODUCT OF THE SAILMAKERS' ART ON YOUR YACHT. THAT MEANS GOING TO

WILSON & SILSBY, Inc.

SAILMAKERS

ROWES WHARF BOSTON, MASS.

Estimates and Samples Gladly Furnished

Do You Realize the Significance of These Facts?

FOR years the March Issues of the Boating Magazines have been Special Issues devoted to the sale of Boats. The March, 1917, Number of YACHTING was the leader in this field. It carried 14% more illustrated ads. of Boats-For-Sale than the next largest magazine in the field, and 17% more than the third in point of business of this class carried. Not only was the gain in the *number* of *advertisements*, but in the number of lines carried also.

Furthermore, YACHTING'S growth is shown in the steady increase in the amount of advertising *of all kinds* carried. The first quarter of 1917 shows a gain in advertising carried of 21¾% over the same period of 1916, and 52½% over the same period of 1915. This gain is more than that made by any other magazine in the field.

There Is a Reason!

Because YACHTING is known to reach the people who own and buy Boats of the Better Class.

Advertising Department

YACHTING

141-145 West 36th Street

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SAILING and POWER

BOATS

Safe, Reliable, High-Grade

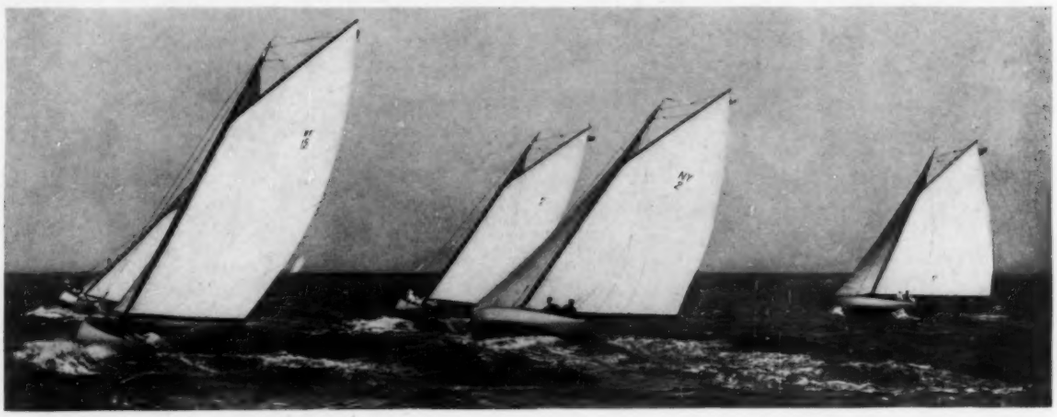
OUR 1917 LINE OF WINNERS:

DORIES—18, 20, 22, and 30 Ft., $325 and up.
SAILING DORIES—14, 16, 18, 21 and 22 Ft. $75 up.
27 and 30 Ft. CRUISERS.
V-RUNABOUTS, 21, 24, 27 and 30 Ft.
GOVERNMENT MODEL LAUNCHES, 22, 25, 30 Ft.
FULL LINE OF ROWING SKIFFS AND DORIES.
Also 18 and 21 CLUB DORIES, Designed by C. D. MOWER, $200 up.
22 Ft. CABIN RACING DORY, $325.
12 Ft. SAILING DUCK BOAT, $60.
24 x 9 Ft. and 24 x 10½ Ft. AUXILIARY CAPE CAT BOAT.
POWER DORIES ALL SIZES, 16 to 30 Ft., $210 and up.
SPECIAL OUTBOARD MOTOR BOAT, $70 and up. Safe and Reliable.

SEND FOR NEW CATALOG

TOPPAN BOAT MFG. CO.

89 No. Washington Street Boston, Mass.



IN A ONE DESIGN CLASS IT IS THE SAILS THAT COUNT IN

WINNING RACES

As we do the finest of Sailmaking and keep expert men employed throughout the year, you are assured of the superior cut and finish that will keep your boat among those that are the leaders of the fleet

ASK FOR ESTIMATES AND SAMPLES

BOTTGER BROS. & CO.,

MARINE BASIN - - - - - - - ULMER PARK
BROOKLYN - - - - - - - - - - NEW YORK
Formerly at CITY ISLAND, N. Y. Phone, Bath Beach 2084

The Genial Goodfellowship of Yachtsmen

is proverbial. Some people attribute it to the rollicking nature of the sport; others to its ups and downs. Those "in the swim" know that the mainstay of it all is found in good old

Evans' Ale and Stout

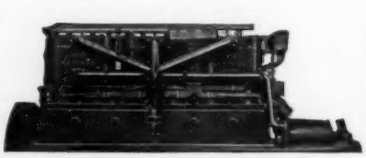
The beverages that add to the enjoyment of every kind of boating—sail, steam or motor. In gale or calm they fill the bill as nothing else will. Always Ready—Cannot Spoil.

Order from your supply man or write to

C. H. Evans & Sons Established 1786 HUDSON, N. Y.

FRANCES II—one of our 65-footers

We build yachts complete and there is no divided responsibility. Our 20th Century Motor, which we build in our own shop, is one of the leading engines. We are in position to build you a complete yacht, furnished and equipped, at prices that cannot be equalled when construction and finish are considered. Let US figure on your new yacht for next season.



6-Cylinder, 6½" x 8½" 65 H.P.
Twentieth Century Engine

N. Y. Yacht Launch and Engine Co.
Morris Heights
New York

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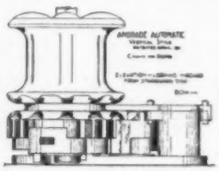
ASK YOUR DEALER FOR DURKEE'S RELIABLE HARDWARE

FULL LINES

Greenhorn and Automatic Foghorns, Cabinet Hardware, Lignumvitae and all kinds of Blocks, Caulking Cotton, Complete Stock of Lanterns and Lights, Nails, Clinch Rings, Etc., Etc.

PROMPT DELIVERY

ANDRADE AUTOMATIC WINDLASS
For Boats 25 Foot Long and Over



Style No. 5
To handle one chain and one rope
(Patented)

The first and only automatic windlass. Has but four moving parts. Gives one man absolute control of his ground tackle at all times and under all conditions.

Send for booklet with full information. The Andrade Windlass makes a one-man boat out of a 60-footer

EELLS STOCKLESS ANCHOR
(Patented)

Its endorsements are immense. It sure is the Anchor with the Bull-Dog Grip. It reduces weight of anchor one-half. Holds on any bottom and buries itself promptly and thoroughly and almost impossible to foul when lying at anchor. Will stand double the strain of any anchor of same weight. Send for Circular. Made from 5 lbs. to 10 tons.

DUNN DIVINHOOD
(Patented)

"It is of great value to Owners of Boats and Yachts and in Shipyards for repairing and cleaning vessels, without expense of docking them."—
World's Work, May issue.

Trade Mark D

HARDWARE
For Wet Places
Gives Hard Wear

CHAS. D. DURKEE & CO. Inc.

Manufacturers of MARINE HARDWARE and MOTOR BOAT SPECIALTIES

2 & 3 South Street - New York

Send 25c to cover delivery 1100 page Catalog or thru your dealer free

DURKEE'S GRAEMERE, NEW YORK CITY, FACTORY
Flag, Mop and Broom Factories and Machine Shops in New York City

If you want to qualify in the

NAVAL COAST DEFENSE RESERVE

Spruce up on your navigation by reading

PUGSLEY'S EXAMINATION SPECIALTIES

	Price, $2.00
Pugsley's GUIDE	" 2.00
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Pugsley's DEAD RECKONING	" 2.00
Pugsley's LATITUDE BY MERIDIAN ALTITUDE	" 1.00
Pugsley's MULTIPLICATION TABLE	" 1.00
Pugsley's LOG BOOK	" .50
Pugsley's LEARNER'S COMPASS CARD	" .25
Pugsley's SEAMAN'S RECEIPT BOOK	

Sold by **YACHTING, 141-145 West 36th Street**

Fix That Leaky Deck Now

MAKE YOUR BOAT TIGHT DURING THE OFF SEASON

DON'T WAIT UNTIL FITTING OUT TIME WHEN EVERY HOUR'S WORK MEANS A DELAY IN GETTING YOUR BOAT, BUT DO THE NECESSARY WORK NOW WHILE YOU HAVE THE TIME—REMEMBERING THAT

JEFFERY'S MARINE GLUE

THE OLD RELIABLE IS THE BEST ON THE MARKET

For Deck and Hull Seams of Yachts and Motor Boats
—USE—
No. 1, Extra Quality

For Waterproofing, Canvas for Covering Decks, Tops of Cabins, Canvas Boats, Canoes and Flying Boats
—USE—
No. 7, Soft Quality

Waterproof Liquid Glue is used for the same purposes as No. 7, Soft Quality
This glue will also attach canvas, cork, felt, rubber, leather, and linoleum to iron, steel, or wood.

Special Marine Canoe Glue
Best Filler for Canvas
Black, White and Yellow
It is a Johnnie-on-the-spot article that no boatman should be without.

For Ships' Deck Use: **No. 2, First Quality Ship Glue. No. 3, Special Navy Glue.** All put up in 1, 2, 3, and 5-lb. cans; also 14, 28, 56 and 112-lb. boxes, either tin or wood.

INSIST ON HAVING THE RIGHT KIND IF YOU HOPE TO OBTAIN SATISFACTORY RESULTS

The largest dealer in town carries this in stock; if not, he should. Tell him to write us for the agency.

AGENTS WANTED EVERYWHERE, For sale by all Yacht, Boat and Canoe Supply Houses, Hardware and Sporting Goods Dealers. Send for New Booklet, "Marine Glue." What to use and how to use it.

L. W. FERDINAND & COMPANY **152 KNEELAND STREET, BOSTON, MASS., U. S. A.**

Consult YACHTING'S Information Department on any of your problems. Its service is absolutely free.

The Third Annual Miami Regatta

(Continued from page 208)

the series, as Shadow's owner is extremely popular.

The twenty mile displacement runabout race was won easily by Mar-y-cel at an average of 31.87 M.P.H. Three boats started but Otgadai withdrew with a disabled rudder and Baby Glenn ran seven of the eight laps and then had to withdraw with magneto trouble. Mar-y-cel having won all three races in this series carries off the Miami Championship, flag and trophy.

The race that caused the most excitement, and interest was the ten-mile handicap held after the other two events of the day. Mr. O. J. Mulford and R. W. Wadman worked out a handicap on the basis of the actual time made by each boat in the two previous day's racing and then the Judges announced that a handicap race would be held at 3:30 p. m. for all boats participating in the various events. At 3:30 p. m. the first boat Boomerang, was sent away; 5 min. 34 secs. after Boomerang left Raven III started, followed by Shadow III eight seconds later, Baby Glenn 50 seconds later and Mar-y-cel 1 min. 2 secs. later. Throughout the ten miles the interest was at fever heat. Despite the big lead held by Boomerang the other two cruisers rapidly began to overhaul her. Mar-y-cel was simply eating up space and the little twenty-foot Baby Glenn was breaking all her own records and was rapidly overhauling all boats ahead of her. At the start of the last lap Boomerang was ahead followed closely by Raven, Shadow, Baby Glenn, with Mar-y-cel coming up rapidly. At the upper turn Baby Glenn beat them all on the turn and brought the grandstand to its feet by poking her little nose right out in front of them all. All the time the big Mar-y-cel was tearing along in the wake of the others and the finish was guaranteed to be exciting.

Coming up the back stretch Baby Glenn held her position slightly ahead of Raven with the other boats strung along closely behind. As they came down to the finish line Baby Glenn kept the lead but Shadow nosed out Raven for second position, Raven just had half a boat length over Boomerang and Mar-y-cel came up three seconds behind Boomerang and undoubtedly would have won had the race been a mile longer.

Building a 16-Foot Knockabout

(Continued from page 211)

Center-Board Trunk—The center-board trunk pieces are to be of oak or yellow pine ¾-inch thick, 18 inches wide and 5 feet long. The trunk pieces are to extend from 6 inches aft of station No. 3 to a point 6 inches forward of station No. 5. Where the trunk pieces join the keel a very tightly rivetted joint must be made with plenty of white lead between the pieces. The bottom edge of the trunk pieces is to be kept even with the bottom edge of the cheek pieces so that the edge can be used for backing the planks. Filling pieces are to be placed between the trunk sides above the keel aft of station No. 3 and forward of station No. 5.

Frames—The frames are to be spaced on 2-foot centers and are to be fitted as shown in the various details. They are to be of ¾-inch oak or yellow pine and are to be very carefully cut to shape exactly according to the table of offsets. It will be necessary to bevel the outer edge of each frame so that the planking will fit tight against the full width of the frame.

Clamp—The clamps are to be made from spruce or yellow pine 1 inch thick and 2¼ inches wide. The pieces must be long enough to reach from bow to stern in one piece. At the forward end the clamp can be bevelled from 1 inch to ¾ inch thick and boxed into the cheeks.

Chine—The chine is to be of spruce or yellow pine in one length. It is to be 2 inches square and bevelled to suit. At

Ilanasilk
Everready Safety Cushion

Here is the newest idea in boating equipment—a cushion with a life preserver inside. It saves the space of separate life preservers, insures greater safety and provides a handy, comfortable and easily cleaned cushion. The life preserver is the only type that suppports the wearer's head clear of water and is stamped to comply with motorboat laws. Filled with the remarkably soft and buoyant Ilanasilk, the only fibre passed by the U. S. Steamboat Inspection Service for all vessels. With slip-on, snap-button cover of 8 oz. khaki duck. Price postpaid $3.00. Write for booklet showing other Boating and Camping Equipment.

For Mosquito Fleet craft our Patrol Life Preserver is the best and most dependable. Write for particulars.

Universal Safety Mattress Co.
Dept. 14 31 Nassau St. New York

THE HOLLOW SPARS
Used on most all American and foreign racing yachts, are made by the Pigeon-Fraser Hollow Spar Co., makers of all kinds of spars for yachts, working vessels, or ice boats. Either Hollow or Solid.
Pigeon - Fraser Hollow Spar Co.
East Boston, Mass.

GEORGE L. CHAISSON
Practical Boat Builder
Specialties in 10, 11, and 12-feet lap strake cedar yacht tenders. $5.00 per foot. Swampscott dories all sizes, motor boats, etc.
16 Elmwood Road Swampscott, Mass.

WILLIAM H. GRIFFIN
SAIL MAKER
Special attention given to Yacht sails of all kinds, canvas work of every description. Estimates cheerfully given.
OFFICE AND LOFT:
CITY ISLAND, NEW YORK

HOUSTON-SCHOFIELD CO.
Designers and Builders of
Model Racing Yachts
Yachts Built to Plans and Specifications
PORTCHESTER NEW YORK

the forward end it is to be tapered and boxed into the cheeks similar to the clamps. At the after end it is to fit into a notch in the stern cleats.

Stern Cleats—These are ¾-inch x 2-inch pieces of oak or yellow pine fastened to the forward side of the transom with their outer edges ½ inch in from the outer edges of the transom. They are to be set in thick white lead and form a rabbett for the after ends of the planks and decking.

Breast Hook—The breast hook is to be a piece of ¾-inch oak or yellow pine 12 inches square. It is to be fitted between the forward ends of the clamp so that the apex of the breast hook is tightly against the after edges of the stem. The hook is to be fastened from the outside of the planks with long boat nails.

Quarter Knees—The quarter knees are to be similar to the breast hook except they form a brace for the angle formed by the after ends of the clamps and the forward sides of the transom.

Transom—The transom, or stern board is to be of oak, ¾ inch thick and shaped as shown in the detail. It will have to be made from an 18-inch piece of stock. If the wide stock cannot be obtained it can be made from two 9-inch pieces dowelled together.

Deck Beams—The regular frames will form the deck beam, but intermediate beams will be required half way between each frame. These beams will be of spruce, 1 inch thick by 1½ inches deep. They are to be mortised into the clamps at the ends.

Seam Battens—The inside of each plank seam is to be backed with a seam batten of spruce, ⅝ inch thick and 1 inch wide. The battens are to be full length, and are to be boxed into the cheeks and stern cleats.

Planking—The planks are to be of either ½-inch cedar or cypress. They are to be put on in one length and fastened to the frames with 1½-inch galvanized screws and to the battens at 6-inch intervals with 1½-inch galvanized boat nails. the points of the nails being turned over in the wood. The garboards are to be fastened to the cheeks and keel with screws. The forward and after ends of the planks are to be screw-fastened. The forward ends of the planks are to be bevelled off so that they fit the angle formed by the cheeks and keel plank. A thick coating of white lead is to be placed between the planks and the cheeks and stern cleats. All fastenings are to be sunk in so that the heads can be covered with putty.

Lumber for Sixteen-foot Knockabout

Keel, 1 piece Oak or Yellow Pine, 15′ by 9″ by ¾″.
Stern cleats, Breast hooks, Quarter knees } 1 piece Oak or Yellow Pine 6′ by 1′ by ¾″.
Check pieces, 1 piece 10′ by 1′ by ¾″ Oak or Yellow Pine.
Center-board trunk, 1 piece 10′ by 18″ by ¾″ Oak or Yellow Pine.
Frames, 40 square feet ¾″ Oak or Yellow Pine.
Clamp, 1 piece 17′ by 5″ by 1″ Spruce or Yellow Pine.
Chine, 1 piece 17′ by 4″ by 2″ Spruce or Yellow Pine.
Transom, 1 piece 5′ by 18″ by ¾″ Oak or Yellow Pine.
Intermediate deck beams, 1 piece 6′ by 1′ by 1″ Spruce.
Seam battens, 1 piece 17′ by 1′ by ⅝″ Spruce.
Planking, 8 pieces 17′ by 1′ by ½″ Cedar or Cypress.
Decking, 60 square feet ½″ White Cedar or Cypress.
Mast and spars, 1 piece Spruce 12′ by 3″ by 12″, or 3 pieces 3″ by 3″.
Rudder, 1 piece Oak 3′ by 18″ by ¾″.
Tiller, 1 piece 6′ by 1½″ by 3″ Oak.

NOTE:—The above list will have to be arranged so that several items will be obtained from the same board. This will have to be done according to the lumber available. By properly combining, the lumber (in the locality of New York) can be obtained for about $26.00.

Proposed Scout Cruiser

(*Continued from page 226*)

attention was paid to convenience and to the use of as small a crew as possible. The officers' quarters are aft, consisting of a large wardroom, four staterooms, bathroom and storeroom. Forward of the motorroom is an officers' messroom with entrance through the wheel house. Forward of this is the crew's messroom and a large foc'sle with 12 pipe berths. By this arrangement one galley will take care of both the officers' and crew's messroom with the greatest convenience, allowing a very small messroom department.

In this boat we have naturally sacrificed pure speed qualities for sea-going ability and good all round utility, yet she is easy to drive and contains in her design the elements so necessary to enable the boat to stay out in almost any weather that might be encountered off the coast, winter or summer, with a reasonable degree of comfort for her crew. She will be heated, of course, for winter service.

She could be built either of wood or steel but, at the present time, preferably of the former on account of the greater speed with which she could be turned out in most of our yacht yards; though with plenty of time we would recommend steel. The boat could be lengthened out from 10 to 20 feet, if a larger craft was desired.

The King of Sports

Invigorating—spontaneous—and interesting to the last degree—is trapshooting. It is the Sport of Kings and the King of Sports—replete with excitement and exhilaration.

Winging the wily clay pigeon has become quite *de rigueur* in smart country places and has proved a welcome boon to both host and hostess in the entertainment of house parties.

Write for the "Sport Alluring" Booklet No. 425

E. I. Du Pont De Nemours & Co.
Wilmington **Delaware**

DU PONT

Removing Old Paint

(*Continued from page 202*)

The best way to remove paint is by burning it off. There are on the market several makes of burners that combine a gasolene torch and scraper with which this work is made very easy; the torch softening the paint and making its removal easy. An ordinary plumber's torch and a wide-bladed putty knife are sufficient for the work, though, if one of these patent burners is not available. It is not necessary to remove the paint unless it is much cracked and blistered. Some of the more powerful patent paint removers are also splendid agents for getting rid of the old coats.

YOUR BEST INSURANCE IS A
Fairhaven Bulb Shank Mooring
WRITE TO THE
Fairhaven Iron Foundry Co.
FAIRHAVEN, MASS.

PARAGON
REVERSE GEARS
for the highest grade motors
PARAGON GEAR WORKS TAUNTON, MASS.